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In The

Supreme Court of the United States

October Term, 1994

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III, AND BERNICE HICKS,

Petitioners,

v.

COMMONWEALTH OF MASSACHUSETTS AND
TOWN OF CHATHAM, INTERVENOR,

Respondents.

**Petition For A Writ Of Certiorari
To The Supreme Judicial Court
For The Commonwealth Of Massachusetts**

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED FOR REVIEW

Whether exhaustion of administrative remedies is required where substantial property rights are involved, delay is extraordinary and the remedies do not meet minimum constitutional standards.

Whether a state may prohibit seawalls without showing they would constitute a nuisance at common law.

Whether flooding caused by such a prohibition is an invasion and taking by government.

Whether the state may impose regulations that substantially diminish the value of private property without showing a "substantial relationship" to a valid state purpose.

LIST OF PARTIES

The parties to the proceedings below were the Petitioners, Alfred Nelson, Evelyn Nelson, Lewis Hicks, III and Bernice Hicks, and the Respondents, the Commonwealth of Massachusetts and the Town of Chatham, which intervened.

TABLE OF CONTENTS

Page

Questions Presented for Review i

List Of Parties..... ii

Table of Authorities iv

Opinions Below 2

Statement of Jurisdiction..... 3

Constitutional Provision and Statute Involved..... 4

Statement of the Case 5

Reasons for Granting the Writ 8

1. No Need to Exhaust Unconstitutional Administrative Remedies..... 9

2. Administrative Remedies Violate Lucas..... 15

3. Physical Invasion 16

4. Balancing Public and Private Interests..... 17

5. Standing..... 20

Conclusion 21

TABLE OF AUTHORITIES

Page

CASES:

Agins v. City of Tiburon, 477 U.S. 255, 100 S.Ct. 2138, 65 L.Ed.2d 106 (1980) 9, 17, 18, 20

Armstrong v. United States, 364 U.S. 40, 80 S.Ct. 1563, 4 L.Ed.2d 1554 (1960) 17

Dolan v. City of Tigard, No. 93-518, ___ U.S. ___, ___ S.Ct. ___, 1994 WestLaw 876693 (1994) 13, 17, 18, 19, 20

First English Evangelical Lutheran Church of Glendale v. County of Los Angeles, 482 U.S. 304, 107 S.Ct. 2378, 96 L.Ed.2d 250 (1987) 20

Kirby Forest Industries, Inc. v. United States, 467 U.S. 1, 104 S.Ct. 2187, 81 L.Ed.2d 1 (1984) 17

Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 102 S.Ct. 3164, 73 L.Ed.2d 868 (1982) 16, 17

Lucas v. South Carolina Coastal Council, ___ U.S. ___, 112 S.Ct. 2886, 120 L.Ed.2d 798 (1992) 8, 13, 16, 20

MacDonald Sommer & Frates v. Yolo County, 477 U.S. 340, 106 S.Ct. 2561, 91 L.Ed. 285 (1986) 9, 15

Nollan v. California Coastal Commission, 483 U.S. 825, 107 S.Ct. 3141, 97 L.Ed.2d 677 (1987) 16, 17, 18, 20

Penn Central Transportation Co. v. New York City, 438 U.S. 104, 98 S.Ct. 2646, 57 L.Ed.2d 631 (1978) 17, 18

Pumpelly v. Green Bay Co., 13 Wall [80 U.S.] 166, 20 L.Ed. 557 (1887) 17

St. Luke's Hospital v. Labor Relations Commission, 70 N.E.2d 10 (1946) 16

TABLE OF AUTHORITIES – Continued

Page

U.S. v. Lynah, 188 U.S. 445, 23 S.Ct. 349, 47 L.Ed. 539 (1903) 17

Williamson County Regional Planning Commission v. Hamilton Bank, 473 U.S. 172, 105 S.Ct. 3108, 87 L.Ed.2d 126 (1985) 9, 16

Wilson v. Commonwealth, 597 N.E.2d 43 (Mass. 1992) 16

Worcester Sand and Gravel v. Fire Prevention Board, 510 N.E.2d 267 (Mass. 1985) 19

STATUTES AND REGULATIONS:

Wetlands Protection Act, Massachusetts General Laws, Chapter 131, Section 40 ..... 4, 5

Massachusetts Environmental Protection Act, Massachusetts General Laws, Chapter 30, Section 61-62H 4, 10

310 Code of Massachusetts Regulations, Section 10.00 et seq. 4, 5, 11, 12, 13, 19

301 Code of Massachusetts Regulations, Section 11.16 ..... 5, 14

28 United States Code, Section 1257(a) 4

Massachusetts General Laws, Chapter 231A, Sections 2 and 3 16

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Petition For A Writ Of Certiorari
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PETITION FOR A WRIT OF CERTIORARI

The Petitioners Alfred Nelson, Evelyn Nelson, Lewis Hicks, III and Bernice Hicks respectfully pray that a writ of certiorari issue to review the February 28, 1994 judgment and opinion of the Appeals Court for the Commonwealth of Massachusetts, and the April 26, 1994 denial of their Petition for Further Appellate Review to the Supreme Judicial Court of the Commonwealth of Massachusetts.

OPINIONS BELOW

The Notice of Denial of Further Appellate Review Application issued by the Supreme Judicial Court for the Commonwealth of Massachusetts on April 26, 1994 is reprinted in the Appendix hereto, at App. 8, infra.

The Memorandum and Order of the Appeals Court for the Commonwealth of Massachusetts dated February 28, 1994 is reprinted in the Appendix hereto, at App. 1, infra.

The Memorandum of Decision and Order on Defendant's Motion to Dismiss (dismissing three out of four counts of the Petitioners' Complaint) of the Superior Court of the Commonwealth of Massachusetts dated May 31, 1991 is reprinted in the Appendix hereto, at App. 20, infra.

The Memorandum of Decision and Order for Judgment on Cross Motions For Summary Judgment (dismissing Petitioner's remaining count) of the Superior Court of the Commonwealth of Massachusetts dated April 30, 1992 is reprinted in the Appendix hereto, at App. 9, infra.

Pleadings relating to Petitioner Nelsons' first pending administrative action, Docket SE No. 10-804 and 10-805 (Notice of Intent dated June 22, 1989, Order of Conditions of Chatham Conservation Commission on remand dated September 22, 1989, and Superseding Order of Conditions of the Department of Environmental Protection dated March 29, 1990) are reprinted in the Appendix hereto, at App. 25, 30 and 31, infra.

Pleadings relating to Petitioner Hicks' first administrative action, Docket SE 10-855 (Notice of Intent dated

February 5, 1990, Order of Conditions of the Chatham Conservation Commission dated April 2, 1990, and Superseding Order of Conditions of the Department of Environmental Protection dated November 20, 1990) are reprinted in the Appendix hereto, at App. 34, 44 and 45, infra.

Pleadings relating to Petitioner Nelsons' second pending administrative action, Docket SE-10 987 (Notice of Intent dated December 23, 1991, Order of Conditions of the Chatham Conservation Commission dated January 30, 1992, and Superseding Order of the Department of Environmental Protection dated October 20, 1992) are reprinted in the Appendix hereto, at App. 48, 52 and 55, infra.

Pleadings relating to Petitioner Hicks' second administrative action, Docket SE 10-1027 (Notice of Intent dated May 15, 1992, Order of Conditions of the Chatham Conservation Commission dated July 2, 1992, and Superseding Order of the Department of Environmental Protection dated November 9, 1992) are reprinted in the Appendix hereto, at App. 66, 70 and 72, infra.

Certification of Environmental Impact Reports for the Chatham area pursuant to Massachusetts General Laws, Chapter 30, sec. 61-62H and dated September 30, 1993 and June 30, 1994 are reprinted in the Appendix hereto, at App. 76 and 80, infra.

STATEMENT OF JURISDICTION

Petitioners seek review from the opinion and judgment of the Appeals Court for the Commonwealth of

Massachusetts dated February 28, 1994. Petitioners' subsequent Request for Further Appellate Review was denied by the Supreme Judicial Court for the Commonwealth of Massachusetts on April 26, 1994. The Supreme Court has jurisdiction to review cases from state courts by virtue of 28 U.S.C. sec. 1257(a).

CONSTITUTIONAL PROVISION AND STATUTE INVOLVED

The Fifth Amendment of the United States Constitution provides that "private property [shall not] be taken for public use without just compensation".

The Fourteenth Amendment of the United States Constitution provides that the government shall not take private property without "due process".

The Massachusetts Wetlands Protection Act, Massachusetts General Laws, Chapter 131, sec. 40 is set forth in the Appendix, at App. 83, infra.

Regulations (parts I and II) pursuant to the Wetlands Protection Act, 310 Code of Massachusetts Regulations, sec. 10.00 et seq. are set forth in pertinent part in the Appendix, at App. 97, infra.

The Massachusetts Environmental Protection Act, Massachusetts General Laws, Chapter 30, sec. 61-62H is set forth in the Appendix, at App. 125, infra.

Regulation 301 Code of Massachusetts Regulations, Section 11.16, pursuant to the Massachusetts Environmental Protection Act, is set forth in the Appendix, at App. 136, infra.

STATEMENT OF THE CASE

In the early 1960s, Petitioners purchased single family homes on land bordering Chatham Harbor, a body of water protected from the Atlantic ocean by a barrier beach.

In 1978, the Commonwealth of Massachusetts promulgated regulations pursuant to its Wetlands Protection Act, Massachusetts General Laws, Chapter 131, sec. 40. The wetland regulations (310 Code of Massachusetts Regulations, Section 10.00, et seq. hereater "CMR" at App. 97, infra).

In January of 1987, the Chatham barrier beach was breached by an Atlantic storm. The hole in the barrier beach exposed Petitioners' properties to direct attack by ocean waves. Several of Petitioners' neighbors lost their homes because the Commonwealth of Massachusetts denied them permission to build seawalls (Complaint, par. 16, App. 141, infra).

Starting in 1989, Petitioners sought permission to build seawalls to protect their homes (see pleadings relating to administrative actions, App. 25-75, infra). The Town of Chatham denied their requests on a finding that the Petitioners' homes are on coastal dune (wind- or water-driven sand). The wetland regulations presume

that seawalls on coastal dunes cause environmental damage (see page 12, infra).

Petitioner Nelson appealed to the Commonwealth's agency charged with administering the wetland regulations, the Department of Environmental Protection ("DEP"). DEP told Petitioners that they would have to complete a detailed environmental study for 2.5 miles of coast before they would be given an administrative hearing. (See for example DEP correspondence of May 27, 1992, App. 147, infra, referring to study criteria outlined in Certificate of the Secretary of Environmental Affairs on the Environmental Notification Form, App. 152 and 153, infra). Numerous neighbors of Petitioners were allowed to build seawalls without administrative hearing or environmental study. App. 172, infra.

In December of 1990, Petitioners filed an action in the Superior Court for the Commonwealth of Massachusetts seeking, inter alia, declaratory relief from the Commonwealth's environmental practices, a judgment that said practices are unconstitutional, and damages for property loss resulting from the Commonwealth's prohibition of flood relief. (Complaint, App. 139, infra).

In January of 1991, the Superior Court, Dolan, J., presiding, found that Petitioners were in danger of irreparable harm, but did not order injunctive relief (see excerpt of hearing transcript, App. 155, infra). Appeals Court and Supreme Judicial Court single justices also refused to grant injunctive relief.

On May 31, 1991, the Superior Court, Xifaras, J., presiding, relied on the doctrine of exhaustion of administrative remedies to dismiss all of Petitioners' counts except unconstitutional conduct. App. 23, infra.

By early 1990, Petitioners had lost one hundred and sixty feet of beach. (Hicks Notice of Intent dated February 5, 1990, App. 39, infra). By November of 1991 Petitioners' homes had flooded once and the home of Petitioner Nelson was twenty feet from the sea (Affidavit of Alfred Nelson, filed in support of motions for temporary relief, App. 156, infra). Petitioners brought new requests to build seawalls before the Commonwealth's environmental agencies (Nelson Notice of Intent dated December 23, 1991, No. SE-10 987, App. 48, infra and Hicks Notice of Intent dated May 15, 1992, No. SE-10 1027, App. 66, infra). These too were denied.

On April 30, 1992, the Superior Court, O'Neill, J., presiding, dismissed Petitioners' Complaint on a finding that the Commonwealth's regulations are "rationally related" to the purposes of the Commonwealth's Wetland Protection Act (App. 16, infra).

During oral argument held September 20, 1993, the Appeals Court (Brown, J. presiding) ordered DEP to rule on Petitioners' variance requests within thirty days.

In January of 1994, DEP scheduled "expedited" hearings on Petitioners' seawall requests. DEP submitted this schedule to the Appeals Court in posthearing filings (see attachment to DEP denials of variance request dated October 26, 1993, App. 158 and 160, infra).

On February 28, 1994 the Appeals Court, (Brown, J.), affirmed the dismissal on findings that Petitioners had failed to show that the Commonwealth's administrative process is futile or that its regulations are irrational. App. 5 and 6, infra.

In May of 1994 there was an administrative hearing on Petitioners' permit requests. No decision has been reached and a variance hearing has been postponed indefinitely. App. 162, infra.

REASONS FOR GRANTING THE WRIT

1. Petitioners are not required to exhaust unconstitutional administrative remedies.

2. Respondents' regulations insure the imminent destruction of Petitioners' properties, making them worthless and eligible for relief under *Lucas v. South Carolina Coastal Council.*

3. Respondents have taken Petitioners' property by physical invasion.

4. Respondents' regulations have made Petitioners' property worthless, do not balance the interests of the parties, bear no substantial relationship to a legitimate state purpose, and have harmed Petitioners out of all proportion to the ills the regulations seek to limit.

1. NO NEED TO EXHAUST UNCONSTITUTIONAL ADMINISTRATIVE REMEDIES

Exhaustion of administrative remedies is used to restrict access to courts in cases of minor incursions into property rights under regulations whose constitutionality is not in doubt. *MacDonald Sommer & Frates v. Yolo County*, 477 U.S. 340, 350, note 7, 106 S.Ct. 2567, 91 L.Ed. 285 (1986). *Agins v. City of Tiburon*, 477 U.S. 255, 260, 100 S.Ct. 2138, 2141, 65 L.Ed.2d 106 (1980).

Exhaustion doesn't apply where administrative procedures are inadequate. *Williamson County Regional Planning Commission v. Hamilton Bank*, 473 U.S. 172, 195, 205-6 (Stevens, J., concurring), 105 S.Ct. 3108, 3121, 3126, 87 L.Ed.2d 126 (1985).

a. Substantial Rights Involved.

It is undisputed that Petitioners' properties were worth over $2,000,000 before flooding began and have been in imminent danger of destruction by flooding since 1989.

b. Extraordinary Delay.

Petitioners have been trying since 1989 to get seawall permits. Both their houses were flooded in 1991 and one house sustained $100,000 in damage (Affidavit of Alfred Nelson, App. 157, infra). Petitioners have had to spend $140,000 for temporary flood control (see Petitioners' appeal of Superseding Order, App. 62, infra). The houses are without protection from winter storms (Affidavit of

Walter F. Bohlen, Ph.D., filed in relation to motions for temporary relief, App. 165, infra) and could be destroyed at any time.

After five years and with the help of the courts, Petitioners have had a permit hearing. No decision has been reached and the question of a variance has been indefinitely postponed.

Twenty-nine persons in the one mile immediately north of Petitioners have received permits and built seawalls since 1989 (See Figure 4-13 to Chatham Phase I Environmental Impact Report, App. 172, infra). None have had to appeal.

The twenty-nine seawalls were built after informal local hearings under Respondents' regulations and without the Environmental Impact Report ("EIR") usually required by the Massachusetts Environmental Protection Act ("MEPA", G.L.c. 30, secs. 61-62H, App. 127, infra).

Petitioners were denied seawalls in the local hearing, appealed, and were told they must file an EIR describing every seawall proposed or in place for the entire 2.5 miles of flooded coast in order to get a hearing on their appeal. Petitioners own less than 400 feet of frontage.

Petitioners have suffered an expensive five year delay while their neighbors received permits on request.

There is no end in sight. Petitioners could lose their homes before there is a decision (Affidavit of Bohlen, App. 165, infra).

c. Remedies Unconstitutional.

Respondents' regulation assumes that erosion does not exist and that offshore sand returns to dunes and beaches (310 CMR 10.30(1) par. 2, 10.27(1) par. 3, App. 116 and 107, infra).

Dunes and beaches do not receive the flow of sand (id.) and do not absorb wave energy (310 CMR 10.27(1) par. 2, App. 107, infra) or maintain form and volume (310 CMR 10.28(1) par. 5, App. 113, infra) as described by Respondents.

Dunes and beaches erode. All of the sand from this erosion is lost in deepwater. (See Affidavit of Bohlen, App. 165, infra and Affidavit of Ole Secher Madsen, Sc.D., filed in relation to motions for temporary relief, App. 177, infra).

There is no "battle of the experts" on this issue and no room for reasonable dispute. All eroded sand is lost in deepwater forever. Dunes and beaches are temporary way points in this process. Respondents' own expert says 97% of Massachusetts' beaches are eroding (excerpt of Affidavit of Benno Brenninkmeyer, filed in relation to the Commonwealth's motion for summary judgment, App. 181, infra).

Respondents claim that ongoing coastal erosion is storm damage prevention and flood control because it

supplies sand to dunes and beaches (supra, 310 CMR 10.27(1) par. 4, App. 108, infra).

Respondents ban seawalls because they stop erosion. (Seawalls affect "the ability of waves to remove sand from the dune" and interfere "with the landward or lateral movement of the dune" [310 CMR 10.28(3)(a) and (d), App. 115, infra].)

Yet seawalls in place before the regulation (1978), new seawalls to protect harbors (310 CMR 10.26, App. 104, infra), new seawalls for many pre-1978 buildings (310 CMR 10.30(3), App. 118 and 119, infra) and seawalls for selected emergencies (310 CMR 10.06, App. 102, infra) are allowed.

Respondents are unable to estimate how many seawalls they have licensed or will license under these exceptions or the amount of sand that these seawalls will deny to dunes and beaches.

Respondents allowed twenty-nine seawalls immediately to Petitioners' north (supra; App. 172, infra).

One of these seawalls protects a private tennis court adjacent to Petitioner Nelson (See excerpts of regulatory paperwork for the Chatham Beach and Tennis Club, No. SE-10 919, App. 182, infra).

According to Respondents, these seawalls deny sand to the dunes and beaches that protect Petitioners (310 CMR 10.30(1) par. 2, App. 116, infra).

Respondents have never explained why these seawalls were permitted and have forbidden inquiry into their impact on Petitioners.

Petitioners, on the other hand, cannot have seawalls until they have shown that their seawalls would benefit others (310 CMR 10.03(1), 10.28(3), and 10.36(2) at App. 101, 114 and 121, infra) and that the sand behind them clearly (310 CMR 10.28(1) par. 6, App. 113, infra) will not "play a role" (310 CMR 10.04 definition of "significant", at App. 102, infra) in the interests identified in the Wetlands Protection Act.

These interests include storm damage prevention, flood control, protection of shellfish beds, water supplies, ground water, wildlife habitat and marine fisheries, and prevention of pollution (310 CMR 10.01(2), at App. 100 and 101, infra).

A clear showing that seawalls play no role in these interests is impossible. "Practically all human activities unless carried on in a wilderness interfere to some extent with others or involve some risk of interference". Restatement (Second) of Torts, sec. 822, Comment g, p. 112 (1979) (App. 190, infra), quoted in *Lucas v. South Carolina Coastal Council*, ___ U.S. ___, 112 S.Ct. 2886, 2898, 120 L.Ed.2d 798 (1992).

The burdens the regulations place on Petitioners violate this Court's takings jurisprudence in *Lucas*, 112 S.Ct. at 2899, and *Dolan v. City of Tigard*, No. 93-518, ___ U.S. ___, ___ S.Ct. ___, 1994 WestLaw 876693, p. 6-9 (1994). Petitioners are entitled to seawalls unless Respondents prove otherwise. It is Respondents' burden to demonstrate that Petitioners' seawalls would cause specific demonstrable harm.

Respondents have illegally manipulated regulatory requirements to frustrate Petitioners' appeals. They changed content requirements of the "Environmental Impact Report" ("EIR", supra) specifically (see Section 6.1 Introduction to Phase I Environmental Report, App. 173 and 175, infra) and illegally (see Massachusetts General Laws, Chapter 30, sec. 62B, par. 2, App. 129, infra and 301 CMR 11.16, App. 138, infra) to forbid discussion of the environmental impact of the twenty-nine seawalls to Petitioners' north.

The impact of the twenty-nine seawalls is critical to Petitioners' appeal. If the seawalls cause erosion, Petitioners need their own seawalls for protection. If not, then Petitioners' seawalls will not cause erosion either.

The EIR for Petitioners' area had to describe the impact of every single seawall proposed or built. When it found that a single wall for the area would not cause damage, Respondents ordered a re-examination of the finding on a case by case basis (Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report [Phase II of Chatham EIR study], App. 81, infra).

Respondents' regulation is a perpetual erosion scheme intended to return the coast to a state of nature by destroying development. (See "Saving the American Beach: A Position Paper by Concerned Coastal Geologists", signed by Respondents' experts Dr. Orin H. Pilkey, Jr., Dr. Benno Brenninkmeyer, and Jeff Benoit, filed by Petitioners in relation to motions for summary judgment, excerpted at App. 187, infra.)

The coast is the cradle of wetlands. Coastal erosion is wetlands destruction.

Seawalls on the other hand, can protect all coastal interests, including wetlands.

Respondents have embarked on a campaign of coastal destruction without regard for wetlands protection or human rights.

Respondents' remedies are part of this scheme. They are intended to exhaust the financial resources of those who resist.

The argument that Respondents may eventually act favorably on the appeal is not persuasive where a reasonable time to make the decision has passed and ongoing delay means added expense and the risk of complete destruction of the properties.

The record shows that Respondents agencies are not the "singularly flexible institutions" this Court has assumed them to be in the past. *MacDonald,* 47 U.S. at 350, 106 S.Ct. 2567.

A fanciful administrative remedy cannot be allowed to bar enforcement of fundamental constitutional rights.

2. ADMINISTRATIVE REMEDIES VIOLATE LUCAS

Petitioners have been subjected to a different and unconstitutional standard of proof, have been denied critical information and forced to expend substantial sums to defend their property while waiting for Respondents to decide this case.

The only value that remains in Petitioners' properties is the hope that they might some day receive a seawall permit.

At $240,000 (supra), the cost of delay already exceeds this value with no end in sight.

Petitioners' properties are worthless.

Regulations that deny a common land use and deprive land of all economic value require compensation unless the state shows that the intended use would violate principles of common law. The state must act as if seeking "to restrain [Petitioners] in a common-law action for public nuisance". *Lucas*, 112 S.Ct. at 2901.

Petitioners have been denied all meaningful administrative relief. *Williamson*, 473 U.S. at 194-5, 105 S.Ct. at 3121. See also Massachusetts General Laws, Chapter 231A, secs. 2 and 3 (App. 193, infra); *St. Luke's Hospital v. Labor Relations Commission*, 70 N.E.2d 10, 12 (Mass. 1946); *Wilson v. Commonwealth*, 597 N.E.2d 43, 46, footnote 6 (Mass. 1992) (unreasonable agency delay can be brought to Superior Court without exhausting administrative remedies).

3. PHYSICAL INVASION

Government action that leads to the physical invasion of private property is per se compensable under the Fifth Amendment. *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 427, 102 S.Ct. 3164, 3171, 73 L.Ed.2d 868 (1982); *Nollan v. California Coastal Commission*, 483 U.S. 825, 831-2, 107 S.Ct. 3141, 3146, 97 L.Ed.2d 677 (1987); *Lucas*, 112 S.Ct. at 2893.

Exhaustion of remedies doesn't apply to government invasion of private property. Suit can be brought on the date of the intrusion. *Kirby Forest Industries, Inc. v. United States*, 467 U.S. 1, 5, 104 S.Ct. 2187, 2191, 81 L.Ed.2d 1 (1984).

The reasons for government action and the degree of the owners' loss is irrelevant. Compensation is automatic. *Loretto*, 458 U.S. 432, 102 S.Ct. 3174.

The government need not take possession. Here Respondents' seawall denials caused Petitioners' property to be invaded by water. *Pumpelly v. Green Bay Co.*, 13 Wall [80 U.S.] 166, 181, 20 L.Ed. 557 (1887); *U.S. v. Lynah*, 188 U.S. 445, 468-470, 23 S.Ct. 349, 356-357, 47 L.Ed. 539 (1903).

Respondents deny Petitioners seawalls on the theory that sand eroded from Petitioners' unprotected lots provides flood protection to neighboring coastal lots (supra). This is a physical invasion that infringes on private property rights and requires compensation. *Loretto*, id; *Nollan*, 483 U.S. at 831-2, 107 S.Ct. at 3145-6; *Dolan*, 1994 WestLaw 876693 at 5.

4. BALANCING PUBLIC AND PRIVATE INTERESTS

Government action that forces private property owners to bear the entire burden of a public benefit is a taking. The Fifth Amendment requires that serious loss be shared even when substantially related to legitimate state purpose. *Armstrong v. United States*, 364 U.S. 40, 49, 80 S.Ct. 1563, 1569, 4 L.Ed.2d 1554 (1960); *Agins*, 477 U.S. at 260, 100 S.Ct. at 2141.

To determine when compensation is required, courts must make "ad hoc, factual inquiries" balancing the character of the government's action and the impact on the owner's investment-backed expectations. *Penn Central Transportation Co. v. New York City*, 438 U.S. 104, 124, 98 S.Ct. 2646, 2659, 57 L.Ed.2d 631 (1978).

Courts first determine whether regulations which diminish property value "significantly advance" legislative purpose. *Agins v. City of Tiburon*, 477 U.S. at 260, 100 S.Ct. at 2141; *Nollan*, 483 U.S. at 834, note 3, 841, 107 S.Ct. at 3147, note 3, 3150-1.

If this nexus is found, courts then determine whether the regulation is properly tailored to control the harm likely to result from the Petitioners' intended land use. *Dolan*, 1994 WestLaw 876693 at 6-9.

Regulations which restrict land use beyond that needed to control the harm, and regulations which have nothing to do with the intended land use are unconstitutional. The state has the burden of proving the legitimacy of its actions. *Dolan*, 1994 WestLaw 876693 at 9.

Courts below did not follow the Nollan/Dolan tests. They found that there was a "rational basis" for the regulations. This is a test traditionally applied to Fourteenth Amendment cases and cases concerning minor infringements of property rights presenting no specific harm. *Dolan*, 1994 WestLaw 876693 at 13, footnote 8; *Nollan*, 483 U.S. at 834, footnote 3, 107 S.Ct. at 3147 (standard of review is determined by the nature of the right infringed). It fails to balance the likely benefits of the regulation against the certain loss of Petitioners' houses.

Application of the rational basis test to takings leads to "the abdication of meaningful judicial review" of administrative action. *Worcester Sand and Gravel v. Fire Prevention Board*, 510 N.E.2d 267, 272 (Lynch, J., dissent) (Mass. 1985).

Under this test, any tenuous connection between legislative purpose and the regulation is sufficient. This Court has rejected this standard of review as it "improperly relegates the Fifth Amendment to the status of a poor relation". *Dolan*, 1994 WestLaw 876693 at 9.

Respondents' regulations are not substantially related to legislative purpose (see discussion of science relating to the regulations, supra). There is no proportionality between the effect of the regulatory restriction (destruction of Petitioners' homes) and the negligible effect that Petitioners' seawalls might have on neighboring properties.

Respondents deny coastal homeowners the right to protect themselves on the unproven assertion that seawalls do more harm than good (supra).

Respondents do not explain how erosion might protect other interests described in the Wetlands Protection Act such as wildlife habitat, public and private water supplies, ground water, or shellfish beds (310 CMR 10.01(2), App. 100 and 101, infra).

Respondents do not explain how erosion protects wetlands and tacitly reject the concept by selectively allowing seawalls.

Respondents believe that as a practical matter erosion exists only where people build too near the ocean.

Their solution is to destroy coastal properties. (See "Saving the American Beach", excerpted at App. 188, infra.) They substitute a blind reliance on nature for a reasoned assessment of risks and benefits on the coast.

Respondents' practices and procedures have no substantial relation to legitimate state purposes. *Agins*, 477 U.S. 260, 100 S.Ct. at 2141; *Nollan*, 483 U.S. at 834, 107 S.Ct. at 3147. The destruction of Petitioners' property resulting from the application of Respondents' regulations is out of all proportion to any environmental damage that Petitioners' seawalls might cause. *Dolan*, 1994 WestLaw 876693 at 9.

5. STANDING

The trial court dismissed counts challenging the constitutionality of the regulations and seeking injunctive relief and damages on the grounds that administrative remedies were available.

The court heard the issue of Respondents' unconstitutional conduct (Complaint, Count II, App. 143, infra) on motion for summary judgment and found against Petitioners saying that Respondents' regulations are "rationally related" to statutory purpose (supra).

After the appeal was taken and before it was heard, the *Lucas* case was decided. Petitioners argued that *Lucas* applied to all counts in the Complaint in their appellate brief.

"Where the state court has considered and decided the constitutional claim, [the Supreme Court] need not consider how or when the question was raised". *First*

English Evangelical Lutheran Church of Glendale v. County of Los Angeles, 482 U.S. 304, 313, note 5, 107 S.Ct. 2378, 2385, 96 L.Ed.2d 250 (1987).

CONCLUSION

Respondents intend to destroy Petitioners' properties without compensation.

The properties have lost all economic value because they require expensive flood protection during pursuit of meaningless administrative remedies.

There is no legitimate state purpose in Respondents' regulations. Respondents seek to return the coast to a state of nature on the premise that this will protect wetlands.

Respondents have made no showing that this policy ever works, or that it might work on Petitioners' properties. They have failed to compensate those damaged by it.

Petitioners ask that this case be returned to the Massachusetts Appeals Court with a finding that Petitioners are entitled to pursue injunctive relief and damages.

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APPENDIX

TABLE OF CONTENTS

Page

Memorandum and Order Pursuant to Rule 1:28 of the Appeals Court for the Commonwealth of Massachusetts, dated February 28, 1994 .....App. 1

Notice of Denial of F.A.R. Application, Supreme Judicial Court for the Commonwealth Massachusetts, dated April 26, 1994 .....App. 8

Memorandum of Decision and Order for Judgment on Cross Motions for Summary Judgment, Barnstable Superior Court, dated April 30, 1992 .....App. 9

Memorandum of Decision and Order on Defendant's Motion to Dismiss, Barnstable Superior Court, May 31, 1991 .....App. 20

Notice of Intent of Petitioner Nelson (No. SE 10-804), dated June 22, 1989 (excerpt) .....App. 25

Order of Conditions (Nelson, No. SE 10-805; companion to 10-804) of Chatham Conservation Commission, dated September 22, 1989 (excerpt) .....App. 30

Superseding Order of Conditions (Nelson, No. SE 10-804) of Department of Environmental Protection, dated March 29, 1990 (excerpt) .....App. 31

Notice of Intent of Petitioner Hicks (No. SE 10-855), dated February 5, 1990 (excerpt) .....App. 34

Order of Conditions (Hicks, No. SE 10-855) of the Chatham Conservation Commission, dated April 2, 1990 (excerpt) .....App. 44

Superseding Order of Conditions (Hicks, No. SE 10-855) of Department of Environmental Protection, dated November 20, 1990 (excerpt) .....App. 45

APPENDIX

TABLE OF CONTENTS – Continued

Page

Notice of Intent of Petitioner Nelson (No. SE 10-987), dated December 23, 1991 (excerpt)...App. 48

Order of Conditions (Nelson, No. SE 10-987) of the Chatham Conservation Commission, dated January 30, 1992 (excerpt) .....App. 52

Superseding Order of Conditions (Nelson, No. SE 10-987) dated October 20, 1992 (excerpt) .....App. 55

Appeal by Petitioner Nelson of Superseding Order (No. SE-10-987), dated October 22, 1992 .....App. 60

Notice of Intent of Petitioner Hicks (No. SE 10-1027), dated May 15, 1992 (excerpt).....App. 66

Order of Conditions (Hicks, No. SE 10-1027) of Chatham Conservation Commission, dated July 2, 1992 (excerpt).....App. 70

Superseding Order of Conditions (Hicks, No. SE 10-1027) of the Department of Environmental Protection, dated November 9, 1992 (excerpt).....App. 72

Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report, Breach Project, Phase I, EOEA No. 7345, dated September 30, 1993.....App. 76

Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report, Nelson/Breach Project, EOEA No. 8133/7345 (Chatham Phase II), dated June 30, 1994 .....App. 80

Massachusetts General Laws, Chapter 131, Section 40.....App. 83

APPENDIX

TABLE OF CONTENTS – Continued

Page

310 Code of Massachusetts Regulations, excerpts from Sections 10.00 et seq .....App. 97

Massachusetts General Laws, Chapter 30, Sections 61-62H .....App. 125

301 Code of Massachusetts Regulations, Section 11.16 .....App. 136

Complaint, Nelson et al. v. Commonwealth, Commonwealth of Massachusetts, Barnstable Superior Court, Civil Action No. 90-1712 .....App. 139

Correspondence of the Department of Environmental Protection dated May 27, 1992 to Nicholas B. Soutter concerning Nelson seawall request docket SE 10-987 .....App. 147

Certificate of Secretary of Environmental Affairs on the Environmental Notification Form, Breach Project, EOEA Number 7345, dated October 27, 1988 .....App. 151

Transcript of hearing in relation to Nelson et al. v. Commonwealth, et al. held before Dolan, J. on January 3, 1991 (excerpt) .....App. 154

Affidavit of Alfred Nelson, dated November 7, 1991 .....App. 156

Decision on Request for Variance of Department of Environmental Protection (Nelson, SE 10-804 and 10-987, excerpts), dated October 26, 1993 .....App. 158

Decision on Request for Variance of Department of Environmental Protection (Hicks, SE 10-1024, excerpts), dated October 26, 1993 .....App. 160

APPENDIX

TABLE OF CONTENTS – Continued

Page

Decision on Bifurcation of Sedor, J. (Nelson, SE 10-987; Hicks E 10-1027), dated March 25, 1994 .....App. 162

Affidavit of Walter F. Bohlen, Ph.D., dated November 11, 1991 .....App. 164

Phase I Draft Environmental Report, dated January, 1993 (excerpt).....App. 167

Affidavit of Ole Secher Madsen, Sc.D., dated November 12, 1991 .....App. 177

Affidavit of Benno Brenninkmeyer, dated October 22, 1992 (excerpt).....App. 180

Chatham Beach and Tennis Club, Notice of Intent (No. SE-919) filed January 2, 1991 (excerpt) App. 182

Order of Conditions (Chatham Beach and Tennis Club, No. SE-10 919) of Chatham Conservation Commission (excerpt).....App. 186

Saving the American Beach: A Position Paper by Concerned Coastal Geologists, dated March, 1981 (excerpts) .....App. 187

Restatement (Second) of Torts, Section 822, Comment g.....App. 190

Massachusetts General Laws, Chapter 231A, Sections 1-3 .....App. 192

App. 1

COMMONWEALTH OF MASSACHUSETTS

APPEALS COURT

92-P-827

ALFRED NELSON & Others[1]

vs.

COMMONWEALTH; TOWN OF CHATHAM, intervener.

MEMORANDUM AND ORDER
PURSUANT TO RULE 1:28

We affirm the Superior Court's (a) dismissal of count IV of the plaintiffs' complaint (regulatory taking); (b) allowance of summary judgment in favor of the Commonwealth against count II of the complaint (unconstitutionality of wetlands regulations); and (c) declaration of the challenged regulations' constitutionality. Our rulings rest essentially upon the reasons set forth in the May 31, 1991, memorandum and decision and order of the first Superior Court judge and the April 30, 1992, memorandum and order of the second Superior Court judge, as amplified in the thoughtful and balanced appellee's brief of the Commonwealth.[2]

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[1] Evelyn Nelson, Lewis Hicks, III, and Bernice Hicks.

[2] No record references were provided for the vast majority of the factual statements in the plaintiffs' brief. Given the prodigious size of the appendix that the plaintiffs presented to this court, their noncompliance with the mandate of Mass.R.A.P. 16(e), 365 Mass. 862 (1974) & 378 Mass. 940 (1979), not only caused the court substantial inconvenience and unnecessary expenditure of time in determining whether such statements were supported by the record, but also would have justified our striking their entire brief, Mass.R.A.P. 16(k), 365 Mass. 863 (1974), or disregarding virtually all of its contents. See *Service*

As to count IV, the plaintiffs, who still reside in their seaside homes, cannot plausibly assert that they have been denied all economically viable use of their property.[3] Even if they could, however, they have failed to demonstrate that any of the limited exceptions to the long-standing general rule, that administrative remedies must be exhausted before resort may be had to the courts,

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Publications, Inc. v. Goverman, 396 Mass. 567, 580 (1986); *Boston Edison Co. v. Brookline Realty & Inv. Corp.*, 10 Mass. App. Ct. 63, 69 (1980).

[3] A land-use regulation does not effect a taking unless it "denies an owner economically viable use of his land." *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 126 (1985), quoting from *Agins v. Tiburon*, 447 U.S. 255, 260 (1980). *Wilson v. Commonwealth*, 31 Mass. App. Ct. 757, 764-765, *S.C.*, 413 Mass. 352 (1992). It defies logic for the plaintiffs to allege, at this stage, that the Department of Environmental Protection's refusal to allow them to build seawalls amounts to a regulatory taking. "A requirement that a person follow administrative procedures for obtaining a permit is not a taking of property." *Wilson v. Commonwealth*, 413 Mass. at 356-357. Moreover, it is clear that the plaintiffs have not lost all economically viable use of their property. The actual use to which the plaintiffs put their properties has not at all been affected by the denial of their requests. Both homes remain intact, and it is far from a foregone conclusion that the Department will ultimately prohibit protective measures or that the homes will be claimed by the sea. See *id.* at 356 n.4 (plaintiffs could prevail on taking claim, that the Department would have unlawfully denied permission to construct a seawall, only by demonstrating that the Department, after all appeals periods had elapsed, would have unjustifiably denied the request and the denial "would have caused a total loss of the value of the plaintiffs' properties"). Contrast *Wilson v. Commonwealth*, 31 Mass. App. Ct. at 764-767 (dismissal of regulatory taking claim on Mass.R.Civ.P. 12[c] premature where homes had been overrun by the ocean; trial necessary to elicit facts to enable trial judge to make a determination on taking issue).

are applicable to the circumstances of their case. Merely because a constitutional issue is alleged to be involved in their regulatory taking claim does not obviate the exhaustion requirement. See *Wilson v. Commonwealth*, 31 Mass. App. Ct. 757, 765 *S.C.*, 413 Mass. 352, 356 (1992);[4] *Williamson County Regional Planning Commn. v. Hamilton Bank*, 473 U.S. 172, 186 (1985).

There has been no showing that following the administrative process to its conclusion would be futile, in the requisite sense that administrative relief is "virtually

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[4] We mention, in passing, our doubt that a taking analysis is even applicable to the plaintiffs' situations. "Throughout history, the shores of the sea have been recognized as a special form of property . . . subject to different legal rules from those which apply to inland property." *Boston Waterfront Dev. Corp. v. Commonwealth*, 378 Mass. 629, 631 (1979). All titles to oceanfront property derive from the Commonwealth and remain subject to the public trust with which all such property was impressed when held by the Commonwealth through the English Crown, resulting in private owners of shorefront land holding only a qualified property interest that does not extend to interfering with or obstructing the public's rights of navigation, fishing, or other maritime activities and that may not support a taking claim. *Id.* at 632-637, 649; *Wilson v. Commonwealth*, 31 Mass. App. Ct. at 768. See also *National Audubon Soc. v. Superior Court*, 33 Cal. 3d 419, cert. denied, 464 U.S. 977 (1983), and *Orion Corp. v. State*, 109 Wash. 2d 621 (1987), cert. denied, 486 U.S. 1022 (1988) (both standing for the proposition that, to the extent challenged regulations prohibit uses or activities that would violate the public trust which it is the State's duty to protect and enforce, they are insulated from a taking challenge; since shorefront land has been held in public trust or subject to the public trust from the outset, there could not subsequently have been reasonable, investment-backed expectations in, and nothing is taken by prohibiting or regulating, activities violative of or impinging upon the interests protected by the public trust).

impossible" to obtain, *Stock v. Massachusetts Hosp. Sch.*, 392 Mass. 205, 213 (1984), cert. denied, 474 U.S. 844 (1985), for whatever reason, or that there is no chance of success at the administrative level because an adverse outcome is a foregone conclusion. See *Massachusetts Respiratory Hosp. v. Department of Pub. Welfare*, 414 Mass. 330, 337 (1993). See also *Gilbert v. Cambridge*, 932 F.2d 51, 61 (1st Cir.), cert. denied, 112 S.Ct. 192 (1991).[5]

The plaintiffs' affidavits submitted in opposition to the motion to dismiss suggest, at most, considerable delay in the Department's holding of adjudicatory hearings on their appeals. Mere delay, however, does not amount to futility of the sort justifying bypassing the normal administrative processes, particularly when the plaintiffs have presented nothing to suggest the impossibility of ultimately obtaining from the Department permission to build their desired structures as authorized by 310 Code Mass. Regs. §§ 10.28(2) & (3) and 10.30 (1989).[6]

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[5] The plaintiffs gain nothing by invoking G. L. c. 231A, § 2, which authorizes declaratory judgment actions as to administrative practices and procedures alleged to be unconstitutional. The Declaratory Judgment Act has codified the futility exception to the exhaustion requirement. G. L. c. 231A, § 3. In any event, application of the exhaustion requirement in a declaratory judgment action is within the discretion of the trial judge, *I.S.K. Con of New England, Inc. v. Boston*, 19 Mass. App. Ct. 327, 330 (1985), which the plaintiffs have failed to show was abused in any respect in this litigation. See *Mazzoleni v. Cotton*, 33 Mass. App. Ct. 147, 152-153 (1992).

[6] To the extent the judge considered the plaintiffs' affidavits on the motion to dismiss, he would have been entitled in his discretion to disregard them, particularly since the only one (that of Robert E. Weaver) that asserted the Department's

Finally, the plaintiffs have not, beyond conclusory assertion, demonstrated that continued delay in the Department's adjudicatory process will cause them to suffer irreparable harm before the process can run its course (a situation which, if true, might well justify excusing them from further pursuit of the administrative remedy, see *Everett v. Local 1656, Intl. Assn. of Firefighters*, 411 Mass. 361, 368 [1991]). The Nelsons have obtained from the Department an emergency certification (A. 1410-1415) allowing them to install a temporary sand bag revetment to protect their property pending final administrative action on their proposal to build a seawall – an interim solution that the Nelsons do not allege, let alone prove, is or has been ineffective for its purpose.[7] Moreover, the plaintiffs have been unable to persuade either the Superior Court, an Appeals Court single justice, or a Supreme Judicial Court single justice that they are in danger of suffering irreparable harm (A. 1, 2, 216, 217). They have produced nothing before this court, except conjecture, that suggests those tribunals were wrong in finding no likelihood of irreparable harm pending the outcome of the normal administrative process.[8]

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alleged policy against ever allowing property owners in the position of the plaintiffs the relief they sought was unexecuted, was hearsay, and was self-contradictory, since the affiant acknowledged that the Department had in fact allowed more than fifty similarly situated property owners the same relief (A. 341).

[7] For reasons not apparent in the record, the Hickses never sought such emergency relief.

[8] Posthearing filings indicate that the administrative process is nearing completion, with the issuance of a draft environmental impact report, as required by 310 Code Mass. Regs.

As to the summary judgment dismissing the plaintiffs' claim (count II) that the regulations violate the due process and equal protection guaranties, by forbidding the exercise of an unimpeded right to erect a seawall, the plaintiffs have fallen woefully short of meeting their formidable burden on appeal. They have utterly failed to establish the absence of any conceivable ground on which the regulations can be upheld or the lack of any rational relationship between the regulations and a permissible legislative objective. See *Pinnick v. Cleary*, 360 Mass. 1, 14 (1971); *Worcester Sand & Gravel Co. v. Board of Fire Prevention Regulations*, 400 Mass. 464, 467 (1987); *Gilbert v. Cambridge*, 932 F.2d at 65. The Commonwealth submitted substantial affidavit testimony from experts demonstrating that the regulations inhibiting seawall construction on coastal dunes (the areas on which the plaintiffs' properties sit) facilitate flood control and mitigate storm damage – both express statutory purposes, see G. L. c. 131, §§ 40, 40A; cf.

G. L. c. 91, §§ 2, 10, 14, 15, 17, 23 – and that coastal dunes require more restrictive regulation than do coastal banks in order to attain the same goals.

Under the authorities, the plaintiffs could not establish a constitutional violation merely by showing, as they purported to do, that there existed a difference of opinion in the scientific community regarding the effect of seawalls on the beach environment and that there might be a possibly more reasonable way to distinguish between

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§ 10.07 (1989), and the Department's setting of an expedited schedule for holding adjudicatory hearings on the plaintiffs' applications.

banks and dunes or regulate construction thereon. See *Mobil Oil Corp. v. Attorney Gen.*, 361 Mass. 401, 417 (1972); *Zeller v. Cantu*, 395 Mass. 76, 85 (1985); *Arthur D. Little, Inc. v. Commissioner of Health & Hosps. of Cambridge*, 395 Mass. 535, 553 (1985). There was nothing irrational, arbitrary, or invidious about the Department's conscientiously crafted and scientifically based effort to solve problems caused by unregulated construction on coastal dunes and banks.

Judgment affirmed, with double costs of appeal.[9]

By the Court (Brown, Fine, & Laurence, JJ.),
/s/ Warren L. Shields
Asst. Clerk

Entered: February 28, 1994.

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[9] See note 2, *supra*.

Supreme Judicial Court for
the Commonwealth of Massachusetts
1412 Courthouse,
Boston, Massachusetts 02108
(617) 557-1020

Nicholas B. Soutter, Esquire
1 Washington Street, Suite 208
Suite 208
Wellesley MA 02108

RE: Docket No. FAR-07153

ALFRED NELSON & others
vs.
COMMONWEALTH; TOWN OF CHATHAM, intervener

NOTICE OF DENIAL OF F.A.R. APPLICATION

Please take note that on April 26, 1994, the above captioned Application for Further Appellate Review was denied.

Jean M. Kennett, Clerk

Dated: April 26, 1994

To: Nicholas B. Soutter, Esquire
Madelyn Morris, Esquire
Bruce P. Gilmore, Town Counsel

Commonwealth of Massachusetts

BARNSTABLE, ss. SUPERIOR COURT

No. 90-1712

ALFRED NELSON & others[1]

VS.

COMMONWEALTH OF MASSACHUSETTS and another[2]

MEMORANDUM OF DECISION AND ORDER FOR JUDGMENT ON CROSS MOTIONS FOR SUMMARY JUDGMENT

The plaintiffs' complaint seeks recovery against the defendants due to the enforcement of environmental regulations which prohibit the plaintiffs from erecting stone seawalls, or revetments, on their property. Without the erection of these person-made structures, allege the plaintiffs, the natural erosion of the coastal beach and coastal dunes abutting their property will cause tremendous damage to the residences affixed to their coastal real property. The plaintiffs' homes, in short, are slipping into the sea. The court, by a prior Order, dismissed plaintiffs' claims for relief based upon the theories of negligence and regulatory taking because of the plaintiffs' failure to exhaust their administrative remedies. See *Nelson v. Commonwealth*, Civil No. 901712, Memorandum of Decision and Order on Defendant's Motion to Dismiss (Barnstable

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[1] Evelyn Nelson, Lewis Hicks, III, and Bernice Hicks.

[2] Town of Chatham.

Super. Ct., May 31, 1991) (per Xifaras, J., a copy of which is attached as Appendix A).

The defendant, Commonwealth of Massachusetts (Commonwealth), has moved for summary judgment on the plaintiffs' remaining claims, constitutional challenges to the relevant regulations on the basis of substantive due process and equal protection.[3] Following a hearing and plethoric briefing, the court allows the Commonwealth's motion for summary judgment.

FACTS

The relevant material facts to this dispute have already been adequately explicated by the court, see Appendix A, and therefore the court, now, shall only briefly recap the events. In January, 1987, a winter storm washed away a section of a sandy barrier off the coast of Chatham, Massachusetts. The resulting breach, in an area commonly known as Nauset Beach, has spelled catastrophe for certain owners of coastal property in Chatham harbor. The breach is causing natural erosion of the coastline which, in turn, threatens the very existence of the residences affixed to the beachfront properties. See generally *Wilson v. Commonwealth*, 31 Mass. App. Ct. 757, 758-759, further app. rev. granted 412 Mass. 1102 (1992). The plaintiffs sought permission through both the

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[3] The defendant, town of Chatham, does not join in the Commonwealth's motion, although given the court's disposition of these claims, the doctrine of the law of the case would not prohibit the court from subsequently allowing appropriate relief. See *Chase Precast Corp. v. John J. Paonessa Co.*, 409 Mass. 371, 379 (1991).

Chatham Conservation Commission ("Commission") and the Massachusetts Department of Environmental Protection ("Department") to build stone seawalls, or revetments, as an artificial means of preventing further erosion of their property.[4] These requests were denied. The basis for the denial was a finding that the proposed structures would aggravate flooding and impose storm damage on adjacent properties.

The Wetlands Protection Act, G.L. c. 131, § 40 (1990 ed.), protects "coastal dunes" and "coastal banks" and presumes both to be "significant to storm damage and flood control." See 310 Code Mass. Regs. §§ 10.28, 10.28(1), 10.30, 10.30(1) (1987).

A coastal dune is a "natural hill, mound, or ridge of sediment, landward of a coastal bank deposited by wind action or storm overwash." 310 Code Mass. Regs. § 10.28(2). Coastal dunes serve as flood controlling devices by serving as a permeable barrier to the ocean's waves: absorbing wave energy and causing waves naturally to turbulate through and around the dune and thereby protecting upland property. Coastal dunes also

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[4] The plaintiffs' memorandum entreats the court to recognize that artificial retaining walls have been used to protect coastal property for over two thousand (2000) years. The plaintiffs do not, apparently, seek this court to take judicial notice of these allegedly historical facts. The court mentions this merely to note, in passing, that the questionable wisdom of affixing a residential structure to coastal real property has been recognized for a comparable period of time. See Matthew 7:26-27 (" . . . like a foolish man who built his house upon the sand; and the rain fell, and the floods came, and the winds blew and beat against that house, and it fell; and great was the fall of it.")

provide sediment naturally to eroding coastal beaches, the latter which also dissipate wave energy. See *id.*

A coastal bank is the "seaward face or side of any elevated landform other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action or other wetland." 310 Code Mass. Regs. § 10.30(2). Coastal banks serve as a major source of sediment for coastal beaches and dunes and, to a much lesser extent than coastal dunes, act as a buffer for flooding to upland areas by dissipating waves. See *id.*

The regulations directly at issue here prohibit any "dredging, filling, removing[,] or alteration" of coastal banks or coastal dunes if such action interferes with the above-stated flood control functions. See 310 Code Mass. Regs. §§ 10.28(1), 10.30(1). "The regulations draws a key distinction between the two forms of wetlands. While the prohibition against building coastal dune revetments is absolute, see 310 Code Mass. Regs. § 10.28(4), it does not apply to coastal banks, which are exempted because of their height and stability. Revetments may be raised on this type of land if they are built to protect buildings constructed prior to August 19, 1978, if they are absolutely necessary, and if they minimize any adverse environmental impact. 310 Code Mass. Regs. § 10.30(3)." *Wilson v. Commonwealth, supra* at 760.

The Department determined that the plaintiffs' proposed revetments were to be built on coastal dunes, subject to the absolute prohibition, and therefore denied the plaintiffs' proposed project. The plaintiffs challenge the constitutionality of the regulations, 310 Code Mass. Regs.

§§ 10.28, 10.30, on the basis of the due process clause and the equal protection clause.

DISCUSSION

"Summary judgment is a 'device' to make possible the prompt disposition of controversies on the merits without a trial, if in essence, there is no real dispute as to the salient facts or if only a question of law is involved." *Cassesso v. Commissioner of Correction*, 390 Mass. 419, 422 (1983), quoting *Community National Bank v. Dawes*, 369 Mass. 550, 553 (1976). Rule 56(c) of the Massachusetts Rules of Civil Procedure provides that summary judgment shall be granted "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." *Pederson v. Time, Inc.*, 404 Mass. 14, 16-17 (1989) (citations omitted).

The court must not grant summary judgment merely because the facts which the moving party offer appear more plausible than those which the opposing party offers or because it appears that the opposing party is not likely to prevail at trial. *Attorney General v. Bailey*, 386 Mass. 367 (1982). The moving party must affirmatively show that there is no genuine issue of fact on any material issue raised by the pleadings and that the moving party is entitled to judgment as a matter of law. *Pederson*, 404 Mass. at 17. In the case of a defendant moving for summary judgment, this affirmative showing need not

consist of "affirmative evidence negating an essential element of the plaintiff's case, but may be satisfied by demonstrating that proof of that element is unlikely to be forthcoming at trial." *Flesner v. Technical Communications Corp.*, 410 Mass. 805, 809 (1991); *Kourouvacilis v. General Motors Corp.*, 410 Mass. 706, 716 (1991).

The plaintiffs entreat the court to apply a standard of reviewing the regulations that requires they "substantially advance [a] legitimate state interest . . . ", *Wilson v. Commonwealth*, 31 Mass. App. 757, 764 (1992), quoting *Agins v. Tiburon*, 447 U.S. 255, 260 (1980). This is the standard to show a regulatory taking of private property for public use without just compensation, in contravention of the fifth and fourteenth amendments to the United States Constitution. *Wilson, supra* at 764-765. That constitutional claim was previously dismissed by this court, per Xifaras, J. See *Nelson v. Commonwealth*, Civil No. 90-1712. (Barnstable Super. Ct., Memorandum of Decision and Order on Defendant's Motion to Dismiss, May 31, 1991). The court, in dismissing various aspects of what might be described as the plaintiffs' "confused complaint", see *Wilson, supra* at 758 & n.2, specifically held that the plaintiffs had failed to demonstrate futility in failing to exhaust the administrative remedies available to them. *Nelson, supra* at 4.

Therefore, the constitutional claims which have survived the motion to dismiss are the plaintiff's equal protection and due process attacks on the regulations. Under this standard of review, the plaintiff bears the burden of demonstrating to this court the absence of a rational relationship between the adopted measure and its objective. *Wilson, supra* at 764 n.12. See *Nollan v. California*

Coastal Comm'n., 483 U.S. 825, 834 n.3 (1987). The plaintiffs have the "formidable burden of proving the absence of any conceivable ground upon which the regulation can be upheld." *Worcester Sand & Gravel Co. v. Board of Fire Prevention Regulations*, 400 Mass. 464, 467 (1987); see also *Arthur D. Little, Inc. v. Commissioner of Health & Hosps. of Cambridge*, 395 Mass. 535, 553 (1985). But see *Worcester Sand & Gravel Co., supra* at 472 (Lynch, J. dissenting); *Arthur D. Little, Inc., supra* at 557-567 (same).

Even if the rationality of the statute is "fairly debatable", this court cannot substitute its judgment for that of the Department. *Worcester Sand & Gravel Co., Inc., supra* at 467. "This deference is necessary to maintain the separation between the powers of the Legislature and administrative agencies and the powers of the judiciary". *Borden, Inc. v. Commissioner of Public Health*, 388 Mass. 707, 723 (1983). Properly promulgated regulations have the force of law. *Id.* As compared to the courts, administrative agencies " 'may be relatively the experts on many problems of discretion or policy within the areas of their specialization.' " *Arthur D. Little. Inc., supra* at 554, quoting 5 K.C. Davis, Administrative Law, § 29:3, at 343-344 (2d ed. 1984).

The plaintiffs attack the rationality of the regulations by claiming that the natural beach erosion theory is a fallacy. The plaintiffs claim that, by preventing them from building seawalls, or revetments, the Department is actually in violation of the Wetlands Protection Act's policy of preventing flood and storm damage. The department counters with evidence which suggests that the erection off revetments may cause more harm than good. According to the Department, the placement of revetments to

protect coastal dune erosion merely causes wave action to erode contiguous coastal beach, coastal bank, and coastal dune formations downdrift of the person-made artificial structures. Moreover, the Department contends, revetments themselves may become subject to wave action and erosion at the very corners of the artificial structures.[5] When this occurs, the revetment requires either additional reinforcement – causing still greater environmental impact, or the seawall itself may become dislodged, thereby exacerbating the situation it was intended to remedy.

The court's examination of the record[6] indicates that the issue of the rationality of the regulation is, at the very least, debatable and the court, therefore, is bound to refuse to substitute its judgment for that of the Department. See *Worcester Sand & Gravel Co., supra* at 467. This point is illustrated by the plaintiffs' own submissions, see

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[5] The Department's experts refer to this as "scour".

[6] In passing upon a motion for summary judgment, the court recognizes "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any" in determining the undisputed material facts. Mass. R. Civ. P. 56(c). The plaintiffs, in support of their motion for summary judgment, submitted a three hundred and sixty-five (365) page bound "Appendix" which included seventy eight (78) "Exhibits". Most of these exhibits were not incorporated by reference into any form of accompanying affidavit, although some are in proper form. This is woefully inadequate. The Department, however, did not move to strike any parts of the plaintiffs' "Appendix". See *Brunson v. Wall*, 405 Mass. 446, 448 n.4 (1989). Given the relative importance of a determination of the constitutionality of these regulations, the court has examined the plaintiffs' "Appendix" in its entirety, even though it need not have.

supra n.5, which indicate that a debate currently exists in the scientific community as to the way stone seawalls and revetments impact the storm and flood control potential of the natural erosion process by which coastal dunes and coastal banks nourish coastal beaches naturally with sediment. O. Pilkey & H. Wright, Seawalls versus Beaches, Journal of Coastal Research, Special Issue No.4 41, 43 (1988) ("lively disagreement over the active role of seawalls in beach alteration still exists and has become the focus of the 'Great Seawall Debate' . . . there is wide acceptance of the concept of active wall participation in beach degradation."); G. Griggs, J. Tait, K. Scott & N. Plant, The Interaction of Seawalls and Beaches, Coastal Sediments 1871, 1872-1873 (1991) ("[o]ne of the principal complaints of the decisionmaking community is they not only are are [sic] being told one thing by some scientists and something else by others, but they are frequently being told different things at different times by the same scientists.")

Given the general lack of consensus in the scientific community, the court must conclude that the regulations at issue are rationally related to the statutory purposes of the Wetlands Protection Act of storm damage prevention and coastal flood control. Therefore, the plaintiffs' due process claim fails.

Moreover, an administrative agency, in exerting delegated legislative authority in a proper area, may proceed " 'one step at a time, addressing itself to the phase of the problem which seems most acute' " and therefore " 'it need not embrace every conceivable problem within that field' ". *Consolidated Cigar Corp. v. Department of Public Health*, 372 Mass. 844, 854 (1977), quoting *Mobile Oil Corp.*

v. Attorney Gen., 361 Mass. 401, 417 (1972). The court therefore concludes that the differing treatment of the erection of revetments in the "grandfathering" provision of the regulations which protects buildings constructed prior to August 19, 1978, based upon whether the coastal property is classified as a coastal bank or a coastal dune, is rationally based upon the differing effects on natural erosion by these two types of formations. See *Gilbert v. City of Cambridge*, 932 F.2d 51, 66 (1st Cir. 1991) ("absent a clear showing of arbitrariness or irrationality, an equal protection challenge to a state regulation or a municipal ordinance is doomed to failure.") Therefore, the plaintiffs' equal protection claim fails.[7]

ORDER

Based upon the foregoing, it is hereby ***ORDERED*** that:

1) the plaintiffs' motion for summary judgment be, and hereby is ***DENIED***;

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[7] Because the court finds the regulations at issue here to be constitutional, it need not address the Commonwealth's argument that money damages are unavailable to the plaintiff. Parenthetically, the court notes that the Commonwealth's statement that no Massachusetts court has implied from a constitutional provision a direct cause of action is not an accurate statement of the law. See *Layne v. Superintendent, Massachusetts Correctional Institution, Cedar Junction*, 406 Mass. 156, 160 (1989) ("certainly a State may not violate a person's constitutional rights and then fairly assert that no redress can be had because the State has not provided a statutory means of enforcing those rights.")

2) the defendant, Commonwealth of Massachusetts', motion for summary judgment be, and hereby is *GRANTED;* and

3) it is further *DECLARED* that the regulations, 310 Code Mass. Regs. §§ 10.28, 10.30 (1987) are valid and constitutional.

Judgment shall enter for the defendant, Commonwealth of Massachusetts.

/s/ Gerald F. O'Neill, Jr.
Gerald F. O'Neill, Jr.
Justice of the Superior Court

Dated: April 30, 1992

A true copy, Attest:

/s/ Phyllis A. Day
Clerk

APPENDIX "A"

Commonwealth of Massachusetts

BARNSTABLE, ss. SUPERIOR COURT
No. 90-1712

ALFRED NELSON and others[1]

vs.

COMMONWEALTH OF MASSACHUSETTS

MEMORANDUM OF DECISION AND ORDER ON DEFENDANT'S MOTION TO DISMISS

Defendant in this land taking case moves to dismiss plaintiffs' complaint, pursuant to Mass. R. Civ. P. 12(b) (1) and (6) on the grounds of lack of subject matter jurisdiction and failure to state a claim upon which relief can be granted.

BACKGROUND

Plaintiffs own shorefront properties located on a coastal dune in the town of Chatham. Since the area is subject to regulation under the Wetlands Protection Act, plaintiffs filed notices of intent with the Chatham Conservation Commission ("Commission") seeking permission to build an armored dune and stone seawall to protect their properties. After determining that the proposed project would aggravate flooding and impose storm damage on adjacent properties' the Commission issued orders of conditions denying its construction. The Commission

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[1] Evelyn Nelson, Lewis Hicks III, and Bernice Hicks.

suggested alternative means for plaintiffs to protect their properties.

Plaintiffs appealed the Commission's decision, requesting that the Department of Environmental Protection ("Department") issue superceding orders allowing the construction. The Department also denied the construction via superceding orders.

The Nelsons appealed the superceding orders, requesting that the Department hold an adjudicatory hearing. The Hicks did not appeal the superceding orders. Rather, they filed a second notice of intent with the Commission seeking permission to build an artificial dune consisting of sand-filled durabags. The Commission issued an order of conditions allowing this construction. The Department, however, informed the Hicks that it intends to issue an order superceding that of the Commission.

Plaintiffs then filed the instant complaint claiming that the application of the Wetlands Protection Act to their properties amounts to unconstitutional conduct, negligence, and a taking. They seek both money damages and injunctive relief.

In the instant motion, defendant argues, inter alia, that plaintiffs' complaint must be dismissed because they failed to exhaust administrative remedies before seeking judicial relief. Plaintiffs oppose, claiming that G.L. c. 231A, § 2, and G.L. c. 30A, § 7, provide jurisdiction and that exhaustion of remedies is not required where it would prove futile or where irreparable harm would result if judicial action were delayed by the implementation of the administrative process.

DISCUSSION

Whether this court has subject matter jurisdiction to hear plaintiffs' dispute is a question of law for the court to decide. *Villages Development Co. v. Secretary of the Executive Office of Environmental Affairs,* 410 Mass. 100, 105 (1991).

Massachusetts has long followed the rule that in the absence of a statutory directive to the contrary, the administrative remedies should be exhausted before resort to the courts. *East Chop Tennis Club v. Massachusetts Commission Against Discrimination,* 364 Mass. 444, 448 (1973). Courts must be careful not to invade the province of an administrative board. *Saint Luke's Hospital v. Labor Relations Comm.,* 320 Mass. 467, 470 (1946) . The instances are rare where circumstances will require such interference. *Id.* This doctrine of exhaustion of administrative remedies applies to both actions under G.L. c. 30A and G.L. c. 231A. See *Wilczewski v. Commissioner of the Department of Environmental Quality Engineering,* 404 Mass. 787, 792 (1989); *Gill v. Board of Registration of Psychologists,* 399 Mass. 724, 728-729 (1987).

The administrative scheme of relief available to plaintiffs is set forth in G.L. c. 131, § 40, and the regulations promulgated pursuant thereto. The Commonwealth's power to speak with finality on wetlands is manifested throughout the Legislature's comprehensive, protective regulation in this area. *Hamilton v. Conservation Commission of Orleans,* 12 Mass. App. Ct. 359, 367 (1981). Once the Department has issued its final order following an adjudicatory hearing, the administrative process is exhausted. *Wilczewski, supra* at 792.

It is undisputed that no final order has been issued by the Department with respect to the Nelsons' property. The Hicks currently have permission to build an artificial dune. Consequently, plaintiffs have clearly failed to exhaust their administrative remedies under the statutory and regulatory provisions governing wetland areas. The Hicks' argument that administrative proceedings will be futile in this instance is without merit. Although the Department has indicated that it intends to issue an order superceding that of the Commission regarding the Hicks' property, the Hicks would then be entitled to an adjudicatory hearing on any superceding order and a final order. The court therefore rules that counts I, III and IV of plaintiffs' complaint are dismissed for failure to exhaust administrative remedies.

The court further rules that count II of plaintiffs' complaint survives the instant motion. "Where an administrative board is created by or is acting under a statute that is violative of the Federal or a State Constitution . . . then one may challenge the jurisdiction of the board by invoking the aid of the courts and need not wait until the board has made a final order." *Saint Lukes Hospital, supra* at 470. Since plaintiffs have met the narrow exception to the exhaustion of administrative remedies requirement by contending that G.L. c. 131, § 40, is unconstitutional, this claim is not dismissed. See *Wilczewski, supra* at 794.

ORDER

For the foregoing reasons, it is hereby **ORDERED** that defendant's motion to dismiss is **ALLOWED** as to

counts I, III and IV of plaintiffs' complaint and **DENIED** as to count II of plaintiffs' complaint.

/s/ John M. Xifaras
John M. Xifaras
Justice of the
Superior Court

Dated: May 31, 1991

Exhibit 1

310 CMR: DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

10.99: continued

Form 3 LOGO Commonwealth of Massachusetts

[SEAL]
OEOE File No.

(To be provided by DEOE)

City/Town Chatham

Assistant Nelson

Notice of Intent
Under the
Massachusetts Wetlands Protection Act,
G.L. c. 131, § 40
and
Application for a Department of the Army Permit

Part I: General Information

1. Location: Street Address 27 Morris Island Road Lot Number 10A & 11. Assessors Map 16A

2. Project: Type Artificial Dune Description Internally Armored Artificial Dune behind a Primary Dune

3. Registry: County Barnstable Current Book ___ & Page ___

   Certificate (if Registered Land) 29197, 68253

4. Applicant Alfred B. Nelson Tel. 318-226-0700

   Address 401 Edwards – 1500, Shreveport, LA 71101

5. Property Owner Same Tel. _____

   Address _____

6. Representative E.I.I. Engineering Services, Inc. Tel. 617-494-9224

   Address One Kendall Square, Building 600, Cambridge, MA 02139

7. Have the Conservation Commission and the DEOE Regional Office each been sent, by certified mail or hand delivery, 2 copies of completed Notice of Intent, with supporting plans and documents?

   Yes [X] No [ ]

8. Have all obtainable permits, variances and approvals required by local by-law been obtained?

   Yes [ ] No [ ]

Obtained:	Applied For:	Not Applied For:
Not Required		

9. Is any portion of the site subject to a Wetlands Restriction Order pursuant to G.L. c. 131, § 40A or G.L. c. 130, § 1057 Yes [X] No [ ] M.G.L., c. 130, s. 105, paragraph 3G; 4E

10. List all plans and supporting documents submitted with this Notice of Intent.

Identifying Number/Letter	Title, Date
E.I.T. #88-43	William Lieberman, P.E. 6/9/89

11. Check those resource areas within which work is PROPOSED:

(a) [ ] Buffer Zone

(b) Inland:

[ ] Bank*
[ ] Bordering Vegetated Wetland*
[ ] Land Under Water Body & Waterway*

Land Subject to Flooding
[ ] Bordering
[ ] Isolated

(c) Coastal:

[ ] Land Under the Ocean*
[ ] Coastal Beach*
[ ] Barrier Beach
[ ] Rocky Intertidal Shore*
[ ] Land Under Salt Pond*
[ ] Fish Run*

[ ] Designated Port Area*
[XX] Coastal Dune
[ ] Coastal Bank
[ ] Salt Marsh*
[ ] Land Containing Shellfish*

* * *

---

* Likely to involve U.S. Army Corps of Engineers concurrent jurisdictions. See General Instructions for Completing Notice of Intent.

I hereby certify under the pains and penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents and supporting data are true and complete, to the best of my knowledge.

Signature of Applicant	Date
/s/ Robert E. Weaver	6-22-89
Signature of Applicant's Representative	Date

FORM HID 100 (TEST)
1 MAY 82

"Exception to ENG Form 4345 approved by HQUSACE, 6 May 1982".

"This document contains a joint Department of the Army and State of Massachusetts application for a permit to obtain permission to perform activities in United States waters. The Office of Management and Budget (OMB) has approved those questions required by the US Army Corps of Engineers. OMB Number 0702-0036 and expiration date of 30 September 1983 applies". This statement will be set in 6 point type.

U.S.G.S. CHATHAM QUADRANGLE

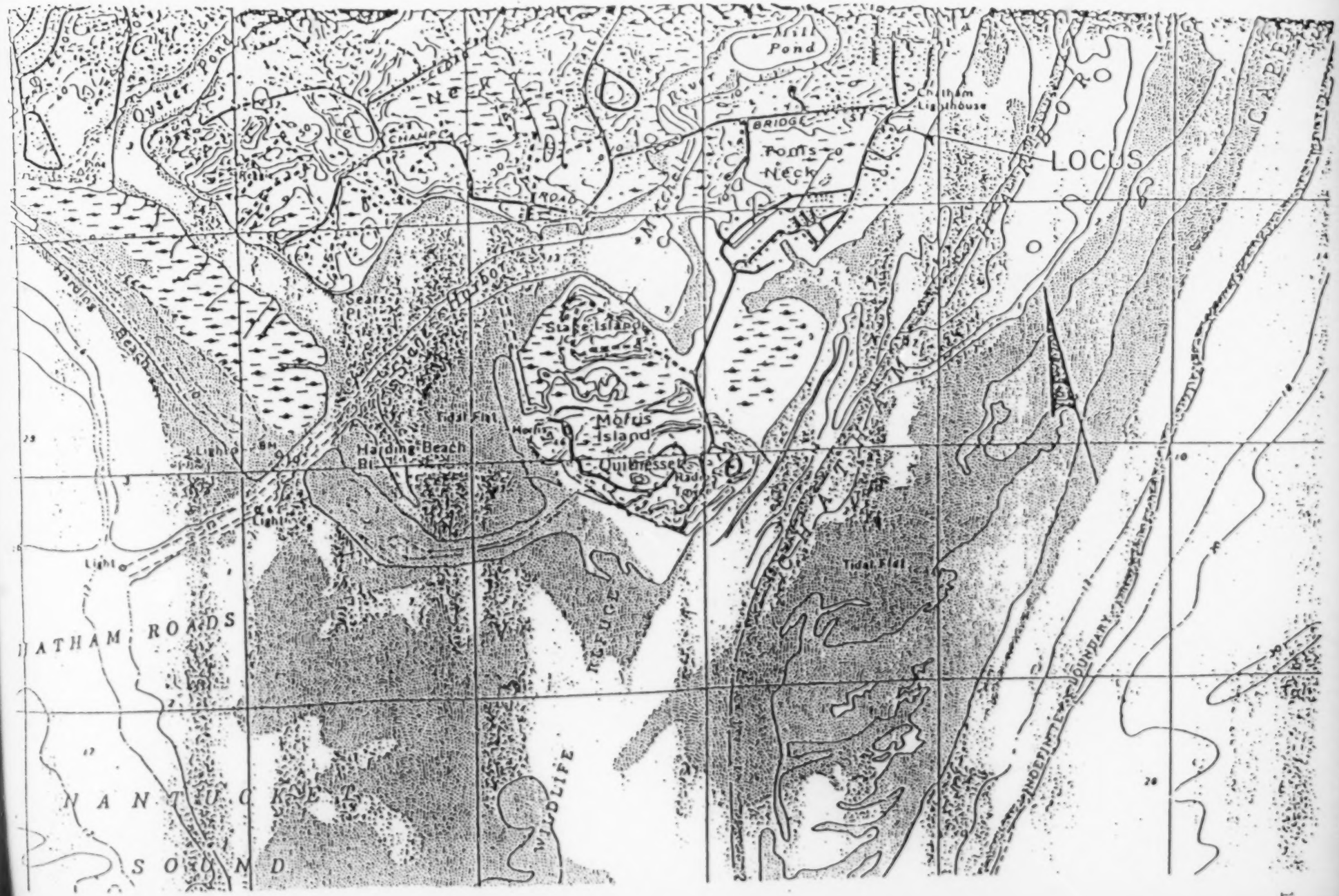

EXHIBIT "B"

TOWN OF CHATHAM

Conservation Commission

FINDINGS ON APPLICATION FOR PERMIT UNDER WETLANDS PROTECTION BY-LAW

FORM 505
FILE NUMBER
SE -10 804

DATE OF ISSUANCE
Sept. 22, 1989

APPLICANT: Alfred Nelson

ADDRESS: 401 Edwards-1500

Shreveport, Louisiana, 71101

OWNER: _____

(If other than applicant)

ADDRESS: _____

LOCATION OF WORK:27 Morris Island Road

After public hearing in accordance with open meeting law M.G.L. Ch. 39, s. 23B, closed on _____, the Chatham Conservation Commission, in accordance with the Town of Chatham Wetlands By-Law finds:

[ ] Permit is granted – work may proceed;

[X] Permit is denied; See page 5-3A

Conservation Commission:

/s/ D. B. Wells
/s/ A. Louis Rogers
/s/ Alice Hiscock
/s/ Paul Chamberlin
/s/ Katherine Abreu
/s/ John Tyner

[LOGO]
Daniel S. Greenbaum
Commissioner

Gilbert T. Joly
Regional Director

The Commonwealth
Executive Office of Environmental Affairs
Department of
Environmental Quality Engineering
Southeast Region
Lakeville Hospital, Lakeville, Massachusetts 02341

DEQE
NOW IS
THE DEPARTMENT OF
ENVIRONMENTAL PROTECTION

March 29, 1990

Robert E. Weaver
E.I.T. Engineering
Services, Inc.
One Kendall Square
Building 600, 2nd Floor
Cambridge, MA 02139

RE: CHATHAM–Wetlands
File No. SE 10-804
Superseding Order of
Conditions

Dear Mr. Weaver:

Following an in-depth review of the above-referenced file and in accordance with Massachusetts General Laws, Chapter 131, Section 40, the Department of Environmental Protection has issued the enclosed Superseding Order of Conditions. This Order denies the project as proposed. The Department has determined that the project area is significant to the statutory interests of storm damage prevention and flood control.

The project proposes the construction of an internally armored artificial dune within a coastal dune resource area as defined at 310 CMR 10.28 (2) of the Wetlands Protection Act Regulations. Said structure would consist of a rock dike covered with sand and vegetation.

The Department has determined that the proposed internally armored artificial dune would affect the ability of waves to remove sand from the dune and interfere with the landward or lateral movement of the dune. Therefore, the Department has found that the proposed project does not meet the performance standard for coastal dunes at 310 CMR 10.28 (3) (a) and (d) and, thus, should not be allowed.

The Department has also determined that the proposed project would fall within a restricted dune (209R) pursuant to M.G.L., Chapter 130, Section 105. The Department has determined that the proposed project would obstruct the movement of sediment and would adversely affect adjacent properties and downcoast areas. Therefore, the Department has found that the proposed project would not comply with 3 (G) and 4 (E) of said Restriction Order.

Please be advised that the Department would encourage the applicant to reconsider the focus of coastal erosion abatement at this site towards beach nourishment, as per 310 CMR 10.27 (5), and away from structural solutions. Alternatively, the applicant should consider relocating any endangered structures landward to more protected areas.

In the opinion of the Department, the reasons given here are sufficient to justify this Superseding Order of

Conditions. However, the Department reserves the right, should there be further proceedings in this matter, to raise additional issues and present further evidence as may be appropriate.

Very truly yours,

/s/ Elizabeth A. Kouloheras
Elizabeth A. Kouloheras,
Chief
Wetlands Section

K/JM/sl

cc: Conservation Commission

Alfred Nelson
401 Edwards – 1500
Sheveport, LA 71101

Kevin M. Foster
Attorney at Law
9 Pearl Street
Leominster, MA 01453

CZM
100 Cambridge Street
Boston, MA 02202
ATTN: Jim O'Connell

310 CMR 10.99

Form 3 LOGO Commonwealth
of Massachusetts

[SEAL]
OEOE File No.

(To be provided by DEOE)

City/Town _____

Applicant HICKS

Notice of Intent
Under the
Massachusetts Wetlands Protection Act,
G.L. c. 131, § 40
and
Application for a Department of the Army Permit
AND TOWN OF CHATHAM WETLANDS BYLAW

Part I: General Information

1. Location: Street Address 40 DUNE DRIVE Lot Number C5 Assessors Map 16A Lot 5, Plan Book 187, Page 1

2. Project: Type Artificial Dune Description Proposed Internally Armored Artificial Dune behind a Primary Dune for the purpose of "Storm damage prevention and Flood control."

3. Registry: County BARNSTABLE Current Book 1342 & Page 997

   Certificate (if Registered Land) _____

4. Applicant LEWIS W. HICKS III Tel. (508) 945-1959

   Address P.O. Box 6308, Lawrenceville, New Jersey 08648

5. Property Owner Same Tel. _____

   Address _____

6. Representative E.I.T. Engineering Services, Inc. Tel. (508) 420-0564

   Address 141 Route 6A, Salt Pond Bldg. P.O. Box 1729, Sandwich, MA 02563

7. a. Have the Conservation Commission and the Department's Regional Office each been sent, by certified mail or hand delivery, 2 copies of completed Notice of Intent, with supporting plans and documents?

      Yes [X] No [ ]

   b. Has the fee been submitted?

      [X] Yes [ ] No

   c. Total Filing Fee Submitted $250.00

   d. City/Town Share of Filing Fee $137.50 (sent to City/Town)
      State Share of Filing Fee $112.50 (1/2 of fee in excess of $25, set to DEP)

   e. Is a brief statement attached indicating how the applicant calculated the fee? [X] Yes [ ] No

      Filing Fee Calculation Worksheet attached

8. Have all obtainable permits, variances and approvals required by local by-law been obtained?

   Yes [ ] No [ ]

Obtained:	Applied For:	Not Applied For:
_____	Wetland By-law	_____
_____	_____	_____
_____	_____	_____

9. Is any portion of the site subject to a Wetlands Restriction Order pursuant to G.L. c. 131, § 40A or G.L. c. 130, § 105? Yes [X] No [ ]

10. List all plans and supporting documents submitted with this Notice of intent.

Identifying Number/Letter	Title, Date
89-38	Artificial Dune Plan, William Lieberman, P.E. 11-3-89 2-1-90

11. Check those resource areas within which work is PROPOSED:

(a) [ ] Buffer Zone

(b) Inland:

[ ] Bank*
[ ] Bordering Vegetated Wetland*
[ ] Land Under Water Body & Waterway*

Land Subject to Flooding
[ ] Bordering
[ ] Isolated

(c) Coastal:

[ ] Land Under the Ocean*
[ ] Coastal Beach*
[ ] Barrier Beach
[ ] Rocky Intertidal Shore*
[ ] Land Under Salt Pond*
[ ] Fish Run*

[ ] Designated Port Area*
[XX] Coastal Dune
[ ] Coastal Bank
[ ] Salt Marsh*
[ ] Land Containing Shellfish*

---

* Likely to involve U.S. Army Corps of Engineers concurrent jurisdictions. See General Instructions for Completing Notice of Intent.

* * *

I hereby certify under the pains and penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents and supporting data are true and complete, to the best of my knowledge.

Signature of Applicant	Date
/s/ Robert E. Weaver	2/5/90
E.I.T. Engineering Services, Inc.	Date
Signature of Applicant's Representative	

FORM NED 100 (TEST)
1 MAY 82

"Exception to ENG Form 4345 approved by HQUSACE, 6 May 1982".

"This document contains a joint Department of the Army and State of Massachusetts application for a permit to obtain permission to perform activities in United States waters. The Office of Management and Budget (OMB) has approved those questions required by the US Army Corps of Engineers. OMB Number 0702-0036 and expiration date of 30 September 1983 applies". This statement will be set in 6 point type.

Chatham
Oyster Pond
Mill Pond
Black Pond
Little Mill Pond
Stage Harbor
Morris Island
Quitness
Tom's Neck
Hiding Beach
Seals Pl
Long Pl
Stetson Cove
Aunt Lydias Cove
Fish Island
Chatham Lighthouse
LOCUS
CAPE COD NATIONA
USGS
CHATHAM QUADRANGLE

E.I.T. Engineering Services, Inc.

One Kendall Square, Building 600, 2nd Floor,
Cambridge, MA 02139
Telephone: (617) 494-9224, FAX: (617) 494-9227,
Telex: 229079

Applicant: Lewis W. Hicks III,
40 Dune Drive, Chatham, MA

NARRATIVE

The applicant's property is located on Dune Drive off of Morris Island Road. It is the center property in a long stretch extending from the Chatham Tennis Club to Outermost Harbor Marina which have been delineated by Coastal Zone Management as "Dune Properties". The area experienced a substantial build up of sand shortly after the breach in Nauset Beach of January 2, 1987. Conditions have changed dramatically since the Spring of 1989, with the applicant along with his neighbors experiencing a loss of approximately 160' of property. A major portion of the land (120') has been lost during the fall and early winter of 1989. His home is now protected only by a narrow berm and a primary dune which is rapidly being eaten away by severe erosion. Unless the erosion is stopped, serious damage or loss will very likely occur to the dwelling resulting in an additional threat to public health and safety. The occurrence of a major coastal storm is likely to accelerate this threat in the entire area.

The proposed construction would be placed in a trough area between the primary dune and the dwelling. The structure would function as and artificial dune. It is composed of a sand core, covered by filter fabric and rocks and then covered by sand and vegetation. During

major storms or severe erosion the sand cover may be washed away. In this case the structure would function as a wave energy absorber, protecting the properties behind it. When conditions return to normal, the structure should again be covered by the normal sand transport process.

This type of structure was selected due to the low elevation of the properties behind it. Most engineering structures that are destroyed in a major hurricane are destroyed not by the initial storm surge, but by undermining of the structure from behind caused by the recession of water from the surge. This structure has been designed with overtopping expected and is two sided. This will prevent undermining from behind and trap sand and debris normally lost by the receding flood waters. It is a structure widely used and proven even in the construction of underwater jetties and breakwaters that are subject to constant wave action. This type of structure has withstood hurricane forces several times in the Fernandina Beach area of Florida. Locally the groin field that exists and is covered just south of the applicants property was built in this manner under a WPA project. In 1961, The Division of Waterways, then under the Massachusetts Department of Public works, under contract #2325 built a stone mound project, East of Nobscusset Point in the Vicinity of Dr. Lord's Road for the town of Dennis. It has worked well, caused no environmental problems, and except after a major Northeast storm it is difficult to find.

We recognize that the "presumption of significance" must be overcome and offer the following into evidence and request the Chatham Conservation Commission

make that determination on Form 7, as provided for in 310 CMR: 10.24:(3) General Provisions. It is our contention that the described engineering structure can protect the statutory interests at stake where the presumptions cannot.

310 CMR: 10.00: IV. B. *Significance;* states "regulation of work within such areas can be justified only if the area contributes in some significant way to the interests identified in the Act. These presumptions can be overcome by showing that the resource area in question functions atypically." (The issuing authority) "can be influenced so as to insure that each resource area is accorded its proper ecological value, no more or no less."

The presumption of significance of dune material in the area on the theory that it provides storm damage protection or flood control when assaulted by direct Atlantic waves should have already been overcome by its performance in the area to the North where several homes have been lost.

In an interview with the "Cape Codder", January 15, 1988, Dr. Grahamn Giess from Woods Hole Oceanographic Institute, and one of the authors of the regulation was quoted as saying, "I'm not sure with the type of shoreline we have here that those regulations apply. The regulations were written with an equilibrium shoreline in mind, a shoreline that remains constant throughout time. This is not an equilibrium shoreline. I think it would be possible to make a valid interpretation finding that the features here are not covered by those regulations which prohibit protection from erosion." In the same article Jeff Benoit, coastal geologist with CZM was quoted as saying,

"when you apply the regulations you mean to preserve as much as possible." This has not been the case in Chatham when the strictest interpretation of the regulation has been applied.

The amount of sand any of these properties could contribute to the system is insignificant when compared to the thousands of yards passing through the breach each day and with the amount of sand continuously in suspension in the water. Dr. Giese's report and the Army Corps report indicate that the sand has mostly clogged the channel to the Fish Pier and Marshall's Marina, which now require constant dredging to keep them open and have done relatively little toward building any long term beaches.

The proposed project is consistent with the Artificial Dune approved for Andrew Harding Lane by the Town of Chatham and The Commonwealth of Massachusetts in early 1988. That project would have impeded the dunes ability to erode to a coastal beach.

The project as proposed will contribute to the protection of the interests identified in the Act.

It will *protect public and private water supply* by preventing loss of town water hookups and mains.

It will *protect ground water supply* by preventing inundation of salt water.

It will provide *flood control.*

It will provide an effective method of *storm damage prevention.*

It will *prevent pollution* by protecting septic systems and preventing the erosion of an area that is reported to be the old town dump.

It will *protect land containing shellfish* by restraining further smothering of their habitat by excess sand.

It will contribute to the *protection of fisheries* by protecting the capacity of the area by reducing shoaling.

It will increase the *wildlife habitat* by adding another dune which is likely to remain intact.

Respectfully,

/s/ Robert E. Weaver
Robert E. Weaver
Environmental Consultant

TOWN OF CHATHAM

Conservation Commission

FINDINGS ON APPLICATION FOR PERMIT UNDER WETLANDS PROTECTION BY-LAW

FORM 505
FILE NUMBER
SE -10 855

DATE OF ISSUANCE
April 2, 1990

APPLICANT: Lewis Hicks III

ADDRESS: P.O. Box 6308
Lawrenceville, N.J. 08648

OWNER: _____
(If other than applicant)

ADDRESS: _____

LOCATION OF WORK:40 Dune Drive

After public hearing in accordance with open meeting law M.G.L. Ch. 39, s. 23B, closed on March 21, 1990, the Chatham Conservation Commission, in accordance with the Town of Chatham Wetlands By-Law finds:

[ ] Permit is granted – work may proceed;

[X] Permit is denied; See Exhibit "A"

Conservation Commission:

/s/ Alice Hiscock
/s/ Eunice Burley
/s/ Douglas B. Wells
/s/ Katherine Abreu
/s/ A. Louis Rogers

[LOGO]
Daniel S. Greenbaum
Commissioner

Gilbert T. Joly
Regional Director

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection
Southeast Region
Lakeville Hospital, Lakeville, Massachusetts 02347

November 20, 1990

Kevin M. Foster
Roberts, Farrell & Rowley
26 George Ryder Road South
P.O. Box 1238
West Chatham, Massachusetts
02669

RE: CHATHAM–Wetlands
File No. SE 10-855
Superseding Order of
Conditions

Dear Mr. Foster:

Following an in-depth review of the above-referenced file and in accordance with Massachusetts General Laws, Chapter 131, Section 40, the Department of Environmental Protection has issued the enclosed Superseding Order of Conditions. This Order denies the project as proposed. The Department has determined that the project area is significant to the statutory interests of storm damage prevention and flood control.

The project proposes the construction of an internally armored artificial dune within a coastal dune resource area as defined at 310 CMR 10.28 (2) of the Wetlands Protection Act Regulations. Said structure would consist of a rock dike covered with sand and vegetation.

The Department waived an on-site inspection pursuant to 310 CMR 10.05 (7) (i) of the Wetlands Protection Act Regulations because said inspection would not of been necessary or useful to a proper and complete review of the proposed project.

The Department has determined that the proposed internally armored artificial dune would affect the ability of waves to remove sand from the dune and interfere with the landward or lateral movement of the dune. Therefore, the Department has found that the proposed project does not meet the performance standard for coastal dunes at 310 CMR 10.28 (3) (a) and (d) and, thus, should not be allowed.

The Department has also determined that the proposed project would fall within a restricted dune (209R) pursuant to M.G.L., Chapter 130, Section 105. The Department has determined that the proposed project would obstruct the movement of sediment and would adversely affect adjacent properties and downcoast areas. Therefore, the Department has found that the proposed project would not comply with 3 (G) and 4(E) of said Restriction Order.

Please be advised that the Department would encourage the applicant to reconsider the focus of coastal erosion abatement at this site towards beach nourishment, as per 310 CMR 10.27 (5), and away from structural solutions. Alternatively, the applicant should consider relocating any endangered structures landward to more protected areas.

In the opinion of the Department, the reasons given here are sufficient to justify this Superseding Order of

Conditions. However, the Department reserves the right, should there be further proceedings in this matter, to raise additional issues and present further evidence as may be appropriate.

Very truly yours,

/s/ Elizabeth A. Kouloheras
Elizabeth A. Kouloheras,
Chief
Wetlands Section

K/JM/sl

cc: Chatham Conservation Commission

Lewis W. Hicks III
P.O. Box 6308
Lawrenceville, NJ 08648

E.I.T. Engineering Services Inc.
141 Route 6A, Salt Pond Bldg.
P.O. Box 1729
Sandwich, MA 02563

DEP – Wetlands Conservancy Program
One Winter Street
Boston, MA 02108
ATTN. Ray Marino

CZM
100 Cambridge Street
Boston, MA 02202
ATTN: Jim O'Connell

CONSERVATION COMMISSION
FORM 300

310 CMR 10.99
Form 3 LOGO Commonwealth
of Massachusetts

[SEAL]
DEP File No.

(To be provided by DEOE)

City/Town Chatham

Applicant Alfred B. Nelson

Notice of Intent
Under the
Massachusetts Wetlands Protection Act,
G.L. c. 131, § 40
and
Application for a Department of the Army Permit

Part I: General Information

1. Location: Street Address 27 Morris Island Road Lot Number 16A, Parcels 10A & 11

2. Project: Type To construct Description To construct a stone breakwater for shorefront protection

3. Registry: County Barnstable Current Book ___ & Page ___

   Certificate (if Registered Land) 2917

4. Applicant Alfred B. Nelson Tel. (813) 262-7505

   Address P.O. Box 8995, Naples, FL 33940

5. Property Owner same as above Tel. –

   Address –

6. Representative Coastal Engineering Co., Inc. Tel. (508) 255-6511

   Address 260 Cranberry Highway, Orleans, MA 02653

7. a. Have the Conservation Commission and the Department's Regional Office each been sent, by certified mail or hand delivery, 2 copies of completed Notice of Intent, with supporting plans and documents?

   Yes [X] No [ ]

   b. Has the fee been submitted?

   [X] Yes [ ] No

   c. Total Filing Fee Submitted $900.00

   d. City/Town Share of Filing Fee $462.50 (sent to City/Town)
   State Share of Filing Fee $437.50 (1/2 of fee in excess of $25, set to DEP)

   e. Is a brief statement attached indicating how the applicant calculated the fee? [X] Yes [ ] No

8. Have all obtainable permits, variances and approvals required by local by-law been obtained?

   Yes [X] No [ ]

Obtained:	Applied For:	Not Applied For:
	None applicable at this time.	

9. Is any portion of the site subject to a Wetlands Restriction Order pursuant to G.L. c. 131, § 40A or G.L. c. 130, § 105? Yes [ ] No [X]

10. List all plans and supporting documents submitted with this Notice of intent.

Identifying Number/Letter	Title, Date
P-1	Proposed Shorefront Protection, Plan View, Sections and Details 11/22/91

11. Check those resource areas within which work is PROPOSED:

(a) [ ] Buffer Zone

(b) Inland:

[ ] Bank*
[ ] Bordering Vegetated Wetland*
[ ] Land Under Water Body & Waterway*

Land Subject to Flooding
[ ] Bordering
[ ] Isolated

(c) Coastal:

[ ] Land Under the Ocean*
[X] Coastal Beach*
[ ] Barrier Beach
[ ] Rocky Intertidal Shore*
[ ] Land Under Salt Pond*
[ ] Fish Run*

[ ] Designated Port Area*
[ ] Coastal Dune
[ ] Coastal Bank
[ ] Salt Marsh*
[ ] Land Containing Shellfish*

---

* Likely to involve U.S. Army Corps of Engineers concurrent jurisdictions. See General Instructions for Completing Notice of Intent.

* * *

I hereby certify under the pains and penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents and supporting data are true and complete, to the best of my knowledge.

Alfred B. Nelson	12/23/91
Signature of Applicant	Date
/s/ Thomas W. Joy, P.E.	12/23/91
Signature of Applicant's Representative	Date

FORM MED 100 (TEST)
1 MAY 82

"Exception to ENG Form 4345 approved by HQUSACE, 6 May 1982".

"This document contains a joint Department of the Army and State of Massachusetts application for a permit to obtain permission to perform activities in United States waters. The Office of Management and Budget (OMB) has approved those questions required by the US Army Corps of Engineers. OMB Number 0702-0036 and expiration date of 30 September 1983 applies". This statement will be set in 6 point type.

TOWN OF CHATHAM

Conservation Commission

FINDINGS ON APPLICATION FOR PERMIT UNDER WETLANDS PROTECTION BY-LAW

FORM 505
FILE NUMBER
SE -10 987

DATE OF ISSUANCE
January 30, 1992

APPLICANT: Alfred Nelson

ADDRESS: P.O. Box 8995
Naples, FL 33940

OWNER: _____
(If other than applicant)

ADDRESS: _____

LOCATION OF WORK: 27 Morris Island Road

After public hearing in accordance with open meeting law M.G.L. Ch. 39, s. 23B, closed on January 28, 1992, the Chatham Conservation Commission, in accordance with the Town of Chatham Wetlands By-Law finds:

[ ] Permit is granted – work may proceed;

[X] Permit is denied;

This project is denied because it does not meet the performance standards of the Town of Chatham Wetlands Protection By-Law, 2.02 and 2.03.

Conservation Commission:

/s/ John Geiger
/s/ Illegible
/s/ A. Louis Rogers
/s/ Alice Hiscock
/s/ Illegible

Plans:

Title	Dated	Signed and Stamped by:	On File with:
Plan for Proposed Shorefront Protection	12/26/91	Thomas W. Joy, P.E.	Commission

Special Conditions (Use additional paper if necessary)

PERMISSION FOR THIS PROJECT IS DENIED

FINDINGS:

1. The Commission finds that this project is conceptually no different from the proposal for an armored dune (SE 10-804) which was denied by the Commission in September of 1989 and, under the Town of Chatham Wetlands Protection By-Law, again in April of 1990 after a remand from Superior Court. If anything, this project is more extensive.

2. The Commission finds that the proposed construction would take place in a Coastal Dune and on a Coastal Beach, and that these resource areas are still significant to storm damage and flood control, particularly with respect to downdrift sediment supply.

3. Therefore the Commission's conclusion must be governed by the performance standards given in 310 CMR 10.27 and 10.28.

CONCLUSIONS:

1. The proposed structure would have unacceptable environmental impacts on the foreshore, on the abutters and on the general area.

2. The proposal does not and cannot meet the performance standards in 310 CMR 10.27 and 10.28.

(Leave Space Blank)

[LOGO] Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of
Environmental Protection
Southeast Regional Office

William F. Weld
Governor
Daniel S. Greenbaum
Commissioner

October 20, 1992

Nicholas B. Soutter, Esq.
Attorney at Law
One Washington Street
Wellesley, Massachusetts
02181

RE: CHATHAM–Wetlands
File No. SE 10-987
Superseding Order of
Conditions – Denial

Dear Mr. Soutter:

Following an in-depth review of the above-referenced file and in accordance with Massachusetts General Laws, Chapter 131, Section 40, the Department of Environmental Protection has issued the enclosed Superseding Order of Conditions. This Order denies the project as proposed. The Department has determined that the project area is significant to the statutory interests of storm damage prevention and flood control.

The project proposes the construction of a stone breakwater at the landward edge of a Coastal Beach (310 CMR 10.27) and within a Coastal Dune (310 CMR 10.28). Said structure would consist of a rock dike partially covered with sand and vegetation. The proposed structure is essentially the same as the previously proposed internally armored artificial dune that the Department

denied on March 29, 1990, for the same property under Wetlands File No. SE 10-804.

The Department has determined that the proposed breakwater would affect the ability of the coastal beach to change its form in response to changes in wave conditions and would interfere with the ability of the coastal beach to erode and act as a sediment source for coastal areas downdrift of the project site. Further, the Department has determined that the proposed breakwater would increase erosion and change the form of the coastal beach and downdrift coastal beaches. Therefore, the Department has determined that the proposed breakwater would not comply with the performance standards imposed for Coastal Beaches at 310 CMR 10.27(3).

The Department has also determined that the proposed breakwater would interfere with the landward or lateral movement of the coastal dune portion of the site. Specifically, the proposed breakwater would interfere with the exchange of sediment between the beach and dune. Further, the proposed breakwater would affect the ability of waves to remove sand from the dune. Therefore, the Department has found that the proposed breakwater would not comply with the performance standards for Coastal Dunes at 310 CMR 10.28(3)(a) and (d).

Further, the Department has determined that the proposed project would fall within a restricted dune (209R) pursuant to M.G.L., Chapter 130, Section 105. The Department has determined that the proposed project would obstruct the movement of sediment and would adversely affect adjacent properties and downcoast areas. Therefore, the Department has found that the proposed project

would not comply with 3 (G) and 4 (E) of said Restriction Order.

Please be advised that the Department would strongly encourage you to consider the option of relocating the dwelling landward to a more protected area of the property and placing the dwelling on an open pile foundation elevated above the FEMA-designated 100-year flood level. Furthermore, the Department would advise you to reconsider the focus of coastal erosion abatement at this site away from structural solutions and towards non-structural ones, as per 310 CMR 10.27(5). Non-structural approaches (so-called "soft engineering") would include beach and dune nourishment and dune enhancement through the utilization of sandtrapping devices and vegetation. Nourishment can be an effective means of retarding coastal beach and dune loss and affording protection to nearby buildings and/or structures.

Please be reminded that the proposed project exceeds the wetland threshold as found in 301 CMR 11.26(7)(a)2b of the MEPA Regulations. The Department's May 27, 1992, letter also advised you of the necessity to comply with MEPA before the Department could permit the proposed project. Your letter of June 2, 1992, requests the Department to waive MEPA requirements and issue a Superseding Order of Conditions. The Department does not have the authority to waive MEPA requirements as only the Secretary of Environmental Affairs, pursuant to 301 CMR 11.18, has that authority. The enclosed Superseding Order of Conditions denying the project proposal is being issued, as you have requested, prior to MEPA compliance. Thus, your client may file a new Notice of Intent when the MEPA process has been completed.

Please be advised that, in the event the enclosed Superseding Order of Conditions is appealed, the Department will require the completion of the MEPA review process in accordance with 310 CMR 10.07 of the Wetlands Protection Act Regulations before issuing a Final Order of Conditions.

In the opinion of the Department, the reasons given here are sufficient to justify this Superseding Order of Conditions. However, the Department reserves the right, should there be further proceedings in this matter, to raise additional issues and present further evidence as may be appropriate.

Very truly yours,

/s/ Elizabeth A. Kouloheras
Elizabeth A. Kouloheras,
Chief
Wetlands Section

K/JM/lr

cc: Chatham Conservation Commission
549 Main St.
Chatham, MA 02633

Alfred Nelson
P.O. Box 8995
Naples, Florida 33940
CERTIFIED MAIL #P 622 583 122
RETURN RECEIPT REQUESTED

Coastal Engineering Co., Inc.
260 Cranberry Highway
Orleans, MA 02653

Madelyn Morris, Esq.
Assistant Attorney General
Office of the Attorney General
John W. McCormack Building
Boston, MA 02202

CZM
100 Cambridge Street
Boston, MA 02202
ATTN: Jim O'Connell

DEP-OGC, 3rd Floor
ATTN: Carl Dierker, Esq.

DEP-DWW, 8th Floor
ATTN: Margaret Finn

cc: MEPA – Unit
100 Cambridge Street
Boston, MA 02202

October 22, 1992

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

Chatham – Wetlands File No. SE 10-987
Superseding Order of Conditions – Denial
Alfred B. Nelson, 27 Morris Is. Road, Chatham.

The Superseding Order of Conditions in the above-captioned matter is appealed for the following reasons.

1) It is one mile from the Nelson house to Morris Island south. Average elevation is 10 feet measured from the coast to 300 feet inland. (The last Chatham flood penetrated 300 feet). This area contains 590,000 cubic yards of sand.

The Department has allowed walls immediately to the north of the Nelson property that cover 3,600 feet of coast. Here there is an average elevation of 20 feet. Measured inland 300 feet this area contains 800,000 cubic yards of sand. This is a dune area under the regulation.

By allowing these walls, the Department has prevented the Nelsons from getting the sand they need to save their property. A seawall is their only remedy.

2) Elevating the house would cost in excess of $100,000. At the present rate of flooding, the septic system would be lost within 5 years and the Department would condemn the house. Elevation is impracticable.

3) It would cost more than $250,000 to move the house. At present levels of flooding it would be threatened within 5 years and lost within 10. Such a move is

illegal under the regulations and local zoning. Moving is not an alternative.

4) The bluff in front of the Nelson house is at elevation 14. This is the highest elevation for a half a mile to the south.

Permanent flooding 300 feet inland is likely. This will destroy between 40 to 80 properties worth 30 to 60 million dollars, a large wetland and the road to Morris Island.

Morris Island losses will exceed 10 million dollars. Stage Harbor will be choked with sand and the wetlands associated with it flooded.

The Nelson seawall is an environmental and economic necessity.

5) The Department waived the MEPA [Ex. 1] and dune/bank [Ex. 2] requirements for the 31 seawalls built north of Nelson since 1987.

6) In June of 1992, the Nelsons advanced $30,000 representing the homeowner's share of an EIR for the flood area from the Fish Pier to Morris Island.

This money was used by the Department to fund an EIR covering half that distance, stopping 25 feet short of the Nelson property. The Department cannot now claim that Mr. Nelson owes it an EIR.

7) Of the 58 parcels of land covered by the abbreviated EIR, 20 are owned by Chatham residents. All 20 have seawalls, most of them on dune and most of them built below Department specifications for Chatham seawalls.

Only 11 non-resident parcels, necessary for the defense of resident-owned properties, have seawalls.

All of the 6 coastal houses lost so far were owned by non-residents who had applied for seawalls. Three were denied permits. The others were given permits with impossible conditions. These conditions were waived for Chatham residents.

The Department denied the Nelsons a seawall because they are not residents of Chatham. This is a violation of Federal and State constitutions and the 1964 Civil Rights Act.

8) It is the obligation of the Department to act promptly.

The Nelson's first applied for a seawall in 1989 and again in 1991. During that time they have lost 280 feet of beach and are now 19 feet from the sea. The Nelsons have never been given a hearing on these denials.

There has never been a hearing on any seawall denial in Chatham. All denials have been to non-residents. The Department says that there must first be an Environmental Impact Report. Yet it has waived that requirement 31 times since 1987.

The Nelsons have made every effort to accomodate [sic] the Department including making available experts in coastal geology and engineering, spending $30,000 on beach nourishment, $110,000 on sand bags and $30,000 on an EIR, all mandated by the Department.

The Department admits that beach nourishment is temporary and stopgap [Ex. 3] and knows that sandbags do not work in Chatham [Ex. 4]. In ordering sandbags for

the Nelson's it denied the use of trap rock to support them, a standard engineering practice [Ex. 5].

The standards mandated by the Department for an EIR in Chatham were set forth in a public letter in October of 1988 [Ex. 6].

The Nelsons advanced $30,000 toward completion of this EIR. The Department used their money to produce an altogether different and harmful document.

This EIR only covers walls approved by the Department. MEPA waivers, dune/bank violations, substandard construction and discrimination are not discussed. It covers less than half the mandated area.

The Department will not allow discussion of the 800,000 cubic yards of sand trapped behind these walls.

It now denies the Nelsons a seawall because it would trap the 15,000 cubic yards of sand they own and because there is no EIR discussing the effects of sand trapping in Chatham.

The Nelsons cannot have a hearing on these issues because " . . . the Department does not have the authority to waive MEPA requirements." [Ex. 7, p. 2].

No hint of remorse, no glimmer of sympathy and, of course, no suggestion of reimbursement is to be found in the present Order.

The Nelson's have been fleeced. They no longer have the time or resources to do a proper EIR. The smooth cadence of the present order's regulatory recitals conceals a cruel cacophony of mismanagement, discrimination and violation of trust.

Under the *Wilson* case it is the obligation of the Department to provide the Nelsons a prompt hearing. This is particularly true where it has used the Nelsons' money to buy itself a custom tailored EIR while leaving the Nelsons naked and defenseless in the flood.

9) There is strong evidence that seawalls do not cause erosion. Under the *Lucas* case, the Department has the burden of showing how a seawall on the Nelson property will damage neighboring properties.

If the Department is not prepared to make this proof promptly, it should allow the Nelsons a wall.

Finally, it was pointed out to the Department some time ago that it had missed the deadline for issuing a Superseding Order in this case.

I am unaware of any subsequent request for a Superseding Order, much less the request for a denial mentioned in the Department's order.

If I am mistaken, please advise.

Absent such advice the Nelsons have the right to build a wall now.

I urge the Department to recognize that right and so bring an end to a struggle that is bad for everybody.

One wall added to the 31 built since 1987 cannot be that earth shaking. The Nelsons have paid a terrible price for it and the Department gets credit for an act of human decency. Please.

Sincerely,

/s/ Nick Soutter
Nick Soutter

TOWN OF CHATHAM
CONSERVATION COMMISSION

310 CMR 10.99 FORM 300
Form 3 LOGO Commonwealth
of Massachusetts

[SEAL]
DEP File No.

(To be provided by DEP)

City/Town Chatham

Applicant Lewis W. Hicks III

Notice of Intent
Under the
Massachusetts Wetlands Protection Act,
G.L. c. 131, § 40
and
Application for a Department of the Army Permit
and
Chatham Wetlands By-Law

Part I: General Information

1. Location: Street Address 40 Dune Drive Lot Number Lot 5 Plan Book 187 R. No. 1 Assessors Map 16A Lot 5C

2. Project: Type Revetmant Description Stone revetment proposed behind primary dune for "storm damage protection and flood control"

3. Registry: County Barnstable Current Book 1342 & Page 997

   Certificate (if Registered Land) _____

4. Applicant Lewis W. Hicks III Tel. (609) 896-0575 (508) 945-1959

   Address P.O. Box 6308, Lawrenceville, New Jersey 08648

5. Property Owner above Tel. _____

   Address _____

6. Representative E.A.S. Survey, Inc. Tel. 398-6813 (508) 888-3619

   Address 141 Rt 6A Salt Pond Bld., P.O. Box 1729, Sandwich, MA 02563

7. a. Ha[illegible] the Conservation Commission and the Department's Regional Office each been sent, by certified mail or hand delivery, 2 copies of completed Notice of Intent, with supporting plans and documents?

      Yes [X] No [ ]

   b. Has the fee been submitted?

      [X] Yes [ ] No

   c. Total Filing Fee Submitted $250.00

   d. City/Town Share of Filing Fee $137.50
      (sent to City/Town)
      State Share of Filing Fee $112.50
      (1/2 of fee in excess of $25, sent to DEP)

   e. Is a brief statement attached indicating how the applicant calculated the fee? [X] Yes [ ] No

8. Have all obtainable permits, variances and approvals required by local by-law been obtained?

   Yes [ ] No [X]

Obtained:	Applied For:	Not Applied For:
	Wetland By-Law	

9. Is any portion of the site subject to a Wetlands Restriction Order pursuant to G.L. c. 131, § 40A or G.L. c. 130, § 105? Yes [X] No [ ]

10. List all plans and supporting documents submitted with this Notice of Intent.

Identifying Number/Letter	Title, Date
Plan No. 92-2	"Revetment Plan" by EAS Survey Inc. motion 5-15-92

11. Check those resource areas within which work is PROPOSED:

(a) [X] Buffer Zone

(b) Inland:

[ ] Bank*
[ ] Bordering Vegetated Wetland*
[ ] Land Under Water Body & Waterway*

Land Subject to Flooding
[ ] Bordering
[ ] Isolated

(c) Coastal:

[ ] Land Under the Ocean*
[ ] Coastal Beach*
[ ] Barrier Beach
[ ] Rocky Intertidal Shore*
[ ] Land Under Salt Pond*
[ ] Fish Run*

[ ] Designated Port Area*
[X] Coastal Dune
[ ] Coastal Bank
[ ] Salt Marsh*
[ ] Land Containing Shellfish*

---

* Likely to involve U.S. Army Corps of Engineers concurrent jurisdictions. See General Instructions for Completing Notice of Intent.

* * *

I hereby certify under the pains and penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents and supporting data are true and complete, to the best of my knowledge.

Signature of Applicant	Date
/s/ Edward A. Stone	5/15/92
EAS Survey, Inc.	Date
Signature of Applicant's Representative	

FORM MED 100 (TEST)
1 MAY 82

"Exception to ENG Form 4345 approved by HQUSACE, 6 May 1982".

"This document contains a joint Department of the Army and State of Massachusetts application for a permit to obtain permission to perform activities in United States waters. The Office of Management and Budget (OMB) has approved those questions required by the US Army Corps of Engineers. OMB Number 0702-0036 and expiration date of 30 September 1983 applies". This statement will be set in 6 point type.

TOWN OF CHATHAM

Conservation Commission

FINDINGS ON APPLICATION FOR PERMIT UNDER WETLANDS PROTECTION BY-LAW

FORM 505
FILE NUMBER
SE -10 1027

DATE OF ISSUANCE
July 2, 1992

APPLICANT: Lewis W. Hicks III

ADDRESS: P.O. Box 6038

Lawrenceville, NJ 08648

OWNER: _____

(If other than applicant)

ADDRESS: _____

LOCATION OF WORK: 40 Dune Drive, Chatham

After public hearing in accordance with open meeting law M.G.L. Ch. 39, s. 23B, closed on June 17, 1992, the Chatham Conservation Commission, in accordance with the Town of Chatham Wetlands By-Law finds:

[ ] Permit is granted – work may proceed;

[X] Permit is denied;

This project is denied for the following reasons:

1. The Commission finds the dunes seaward of the Hicks residence to be significant to stirm [sic] damage prevention and flood control.

2. The Commission has determined that the proposed construction of a stone revetment would affect the ability of the waves to remove sand from the dune and would interfere with the landward movement of

the dune. Therefore, the Commission has determined that the proposed stone revetment does not meet the performance standards for coastal dunes in ther [sic] Town of Chatham Wetlands Protection Regulations, 2.03,(3)(a), (b), (c), (d), (e).

3. The Commission has also determined that the proposed construction of a stone revetment would obstruct the movement of sediment and would have an averse [sic] effect on adjacent and down coast areas. Therefore, the Commission has determined that the proposed stone revetment, within a restricted dune (209R), pursuant to MGL Ch. 130, s.105, would not comply with 3(g), and 4(e) of said restrictions Act.

Conservation Commission:

/s/ John Geiger
/s/ Stuart Moore
/s/ Alice Hiscock
/s/ Illegible
/s/ Illegible

[LOGO] Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of
Environmental Protection
Southeast Regional Office

William F. Weld
Governor
Daniel S. Greenbaum
Commissioner

November 9, 1992

Nicholas B. Soutter, Esq.
Attorney at Law
One Washington Street
Wellesley, Massachusetts
02181

RE: CHATHAM–Wetlands
File No. SE 10-1027
Superseding Order of
Conditions – Denial

Dear Mr. Soutter:

Following an in-depth review of the above-referenced file and in accordance with Massachusetts General Laws, Chapter 131, Section 40, the Department of Environmental Protection has issued the enclosed Superseding Order of Conditions. This Order denies the project as proposed. The Department has determined that the project area is significant to the statutory interests of storm damage prevention and flood control.

The project proposes the construction of a stone revetment within a Coastal Dune (310 CMR 10.28). The proposed structure is similar to the previously proposed internally armored artificial dune that the Department denied on November 20, 1990, for the same property under Wetlands File No. SE 10-855.

The Department choose to waive an on-site inspection pursuant to 310 CMR 10.05 (7) (i) of the Wetlands Protection Act Regulations because said inspection would not of been necessary or useful to a proper and complete review of the proposed project.

The Department has determined that the proposed revetment would affect the ability of waves to remove sand from the dune and would interfere with the landward or lateral movement of the coastal dune. Therefore, the Department has found that the proposed revetment would not comply with the performance standards for Coastal Dunes at 310 CMR 10.28(3)(a) and (d).

Further, the Department has determined that the proposed project would fall within a restricted dune (209R) pursuant to M.G.L., Chapter 130, Section 105. The Department has determined that the proposed project would obstruct the movement of sediment and would adversely affect adjacent properties and downcoast areas. Therefore, the Department has found that the proposed project would not comply with 3 (G) and 4 (E) of said Restriction Order.

Please be advised that the Department would encourage you to consider the options of relocating the dwelling and/or placing the dwelling on an open pile foundation elevated above the FEMA-designated 100-year flood level. Furthermore, the Department would advise you to reconsider the focus of coastal erosion abatement at this site away from structural solutions and towards non-structural ones, as per 310 CMR 10.27(5). Non-structural approaches (so-called "soft engineering") would include beach and dune nourishment and dune enhancement

through the utilization of sandtrapping devices and vegetation. Nourishment can be an effective means of retarding coastal beach and dune loss and affording protection to nearby buildings and/or structures.

Please be reminded that the proposed project exceeds the wetland threshold as found in 301 CMR 11.26(7) (a) 2b of the MEPA Regulations. In the event the enclosed Superseding Order of Conditions is appealed, the Department will require the completion of the MEPA review process in accordance with 310 CMR 10.07 of the Wetlands Protection Act Regulations before issuing a Final Order of Conditions. The Department believes that the MEPA review process offers the opportunity for a comprehensive evaluation of various long-term alternatives for shoreline protection and would encourage you to participate in that process.

Please be advised that if an emergency condition develops that imminently threatens the dwelling, the applicant may request an emergency certification from the Conservation Commission or the Department for beach nourishment and/or the temporary placement of sand bags (recommended maximum size should not exceed 100 pound bags). An emergency certification is intended to abate the emergency until such time as all necessary permits may be obtained for a more permanent solution.

In the opinion of the Department, the reasons given here are sufficient to justify this Superseding Order of Conditions. However, the Department reserves the right, should there be further proceedings in this matter, to

raise additional issues and present further evidence as may be appropriate.

Very truly yours,

/s/ Elizabeth A. Kouloheras
Elizabeth A. Kouloheras,
Chief
Wetlands Section

K/JM/bh

cc: Chatham Conservation Commission
549 Main St.
Chatham, MA 02633

[Logo]

THE COMMONWEALTH OF MASSACHUSETTS

Executive Office of Environmental Affairs

100 Cambridge Street, Boston, 02202

WILLIAM F. WELD
GOVERNOR

ARGEO PAUL CELLUCCI
LIEUTENANT GOVERNOR

TRUDY COXE
SECRETARY

Tel: (617) 727-9800
Fax: (617) 727-2754

September 30, 1993

CERTIFICATE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	:	Breach Project, Phase I
PROJECT LOCATION	:	Chatham
EOEA NUMBER	:	7345
PROJECT PROPONENT	:	Chatham Coastal Erosion Advisory Comm.
DATE NOTICED IN MONITOR	:	August 24, 1993

The Secretary of Environmental Affairs herein issues a statement that the Final Environmental Impact Report submitted on the above project adequately and properly complies with the Massachusetts Environmental Policy Act (G. L., c. 30, s. 61-62H) and with its implementing regulations (301 CMR 11.00).

The breach project is an attempt to protect developed areas in Chatham from the damaging wave climate resulting from the 1987 breach of the Nauset Barrier Beach. The project has been divided into two phases for purposes of

environmental impact review. The Phase I EIR addresses the issues of revetment construction on properties from Aunt Lydia's Cove to the Beach and Tennis Club. A future Phase II EIR will address the environmental issues resulting from efforts to protect properties south of the Beach and Tennis Club to Morris Island. The Phase II area consists of dune fields whereas most of Phase I involves construction of protective structures on coastal banks.

The majority of property owners in the Phase I area have constructed some protective structures under emergency authorizations of this office and DEP. Thus, the focus of the Phase I EIR has been to identify any impacts that have been caused by the structures and to propose mitigation for those impacts. Following the appeal period for this decision, state agencies can issue normal (i.e., non-emergency) permits properly conditioned to minimize the potential impacts documented in the EIR.

The FEIR has also evaluated the environmental impacts of additional efforts which may be necessary to assure the integrity of the coastal revetments and the environmental impacts of enhancing the dunes on two unarmored segments.

The FEIR has expanded and clarified the mitigation commitments of the proponents. Comments have been received that question the ability to ensure that public access will be provided for as mitigation for the beach nourishment to be undertaken by the Town. I request that the permitting agencies require mitigation commitments in the form of public access easements prior to issuance of the state approvals.

Another concern is the longterm loss of public access to the intertidal area. The FEIR proposes that the trigger point for beach nourishment be the movement of the breach to a point opposite the marina. If that is an appropriate distance to be nourishing the beach at the Beach and Tennis Club, it would appear desirable to begin the nourishment of northern areas when a comparable distance becomes available. Since nourishment sand is available on a frequent basis, the total renourishment can be spread over a number of dredging contracts over a number of years, and some of the beach and intertidal areas could be restored in less than 20 to 40 years. Even if some of the nourishment sand is lost to erosion during the project, adequate replacement material is probably available from dredging projects which otherwise must find a disposal site for each dredging effort.

I assume that the dune enhancement will be on-going so as to counteract coastal erosion and maintain adequate storm damage protection.

The conclusions of this FEIR are valid for the next 5 years, and probably longer if a continuing project ensues. If proposals are developed for activities which were not evaluated in this EIR, proponents must submit a notice of project change to my office. Proposals to add further protection already evaluated in the EIR must be submitted only to the permitting agencies. The agencies can act based on the Section 61 Findings prepared in connection with this EIR.

The EIR is also serving as a report of a project of regional significance for the Cape Cod Commission. As

such I understand that a hearing will be held shortly to complete the review by the Commission.

September 30, 1993 /s/ Trudy Cose, Secretary
Date Trudy Coxe, Secretary

Comments received: CCC - 9/23/93
MCZM - 9/24/93
N Soutter -- 9/21/93

TC/DES/ds

[Logo]

THE COMMONWEALTH OF MASSACHUSETTS

Executive Office of Environmental Affairs

100 Cambridge Street, Boston, 02202

WILLIAM F. WELD
GOVERNOR

ARGEO PAUL CELLUCCI
LIEUTENANT GOVERNOR

TRUDY COXE
SECRETARY

Tel: (617) 727-9800
Fax: (617) 727-2754

June 30, 1994

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS ON THE FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	:	Nelson Artificial Dune/ Breach Project
PROJECT LOCATION	:	Chatham
EOEA NUMBER	:	8133/7345
PROJECT PROPONENT	:	Alfred B. Nelson/ Chatham Coastal Erosion Advisory Committee
DATE NOTICED IN MONITOR	:	May 24, 1994

The Secretary of Environmental Affairs herein issues a statement that the Final Environmental Impact Report submitted on the above project adequately and properly complies with the Massachusetts Environmental Policy Act (G. L., c. 30, s. 61-62H) and with its implementing regulations (301 CMR 11.00).

The project represents Phase II of the armoring of coastal bank between the Chatham Fish Pier and Morris Island. A Final EIR for Phase I, which addressed properties between the Fish Pier and the Tennis Club, was determined to be adequate on September 30, 1993. Phase II addresses armoring and other shorefront protection measures between the Tennis Club and Morris Island.

The Department of Environmental Protection (DEP) must act on adjudicatory appeals for coastal structures proposed by several property owners in the Phase II area. The remaining property owners must apply to the Chatham Conservation Commission for approval to construct coastal structures. DEP waterways licenses may be required in the future as well. Section 61 Findings must be prepared and accompany DEP permit actions on the proposals.

I strongly encourage the Town to develop a plan to implement the project as one continuous structure involving each segment.

The project is also being reviewed as a Development of Regional Impact and, as such, requires approval by the Cape Cod Commission (CCC). Joint review between MEPA and the CCC has occurred. A final hearing will be required by the CCC.

I find the analysis provided in the FEIR adequate for purposes of letting the project proceed to the necessary regulatory decisions. Outstanding issues, including the possibility that a variance may be needed, raised by the CCC and the Coastal Zone Management office can be properly addressed in the adjudicatory proceeding and other regulatory processes.

I note that proposals for the Brontas and Blank properties were reviewed under separate MEPA filings, EOEA #8125/8126. An EIR was completed and certified adequate on November 14, 1991.

June 30, 1994 /s/ Trudy Coxe
Date Trudy Coxe

Comments received: MCZM - 6/28/94
CCC - 6/23/94
D DOE - 5/13/94

TC/DES/ds

Massachusetts General Laws,

Chapter 131, Section 40

* * *

§ 40. Removal, fill, dredging or altering of land bordering waters

No person shall remove, fill, dredge or alter any bank, fresh water wetland, coastal wetland, beach, dune, flat, marsh, meadow or swamp bordering on the ocean or on any estuary, creek, river, stream, pond, or lake, or any land under said waters or any land subject to tidal action, coastal storm flowage, or flooding, other than in the course of maintaining, repairing or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility used in the service of the public and used to provide electric, gas, water, telephone, telegraph and other telecommunication services, without filing written notice of his intention to so remove, fill, dredge or alter, including such plans as may be necessary to describe such proposed activity and its effect on the environment and without receiving and complying with an order of conditions and provided all appeal periods have elapsed. Said notice shall be filed by delivery in hand to the conservation commission or its authorized representative or by certified mail, return receipt requested, to said commission, or, if none, to the board of selectmen in a town or the mayor of a city in which the proposed activity is to be located. Upon such filing, the receipt of such notice shall be acknowledged in writing on the face thereof and shall include the time and date so received. A person delivering said notice by hand shall be given a receipt in writing acknowledging the time and

date of such filing. Copies of such notice shall be sent at the same time by certified mail to the department of environmental protection. To defray state and local administrative costs each person filing such a notice shall pay a filing fee, determined on a sliding scale basis by the commissioner of administration after consultation with the secretary of environmental affairs. Fifty percent of any filing fee in excess of twenty-five dollars shall be made payable to the department of environmental protection, in a manner to be determined by the commissioner of environmental protection, at the same time as the copies of the notice are sent to the department of environmental protection. The remainder of said fee shall be made payable to the city or town; provided, that said remainder shall be expended solely by the local conservation commission for the performance of its duties under this chapter and shall accompany the copy of the notice sent to the city or town. No such notice shall be sent before all permits, variances, and approvals required by local by-law with respect to the proposed activity, which are obtainable at the time of such notice, have been obtained, except that such notice may be sent, at the option of the applicant, after the filing of an application or applications for said permits, variances, and approvals; provided, that such notice shall include any information submitted in connection with such permits, variances, and approvals which is necessary to describe the effect of the proposed activity on the environment. Upon receipt of any notice hereunder the department of environmental protection, hereinafter called the department, shall designate a file number for such notice and shall send a notification of such number to the person

giving notice to the conservation commission, selectmen or mayor to whom the notice was given. Said notification shall state the name of the owner of the land upon which the proposed work is to be done and the location of said land.

Any person filing a notice of intention with a conservation commission shall at the same time give written notification thereof, by delivery in hand or certified mail, return receipt requested, to all abutters within one-hundred feet of the property line of the land where the activity is proposed, at the mailing addresses shown on the most recent applicable tax list of the assessors, including, but not limited to, owners of land directly opposite said proposed activity on any public or private street or way, and in another municipality or across a body of water. Said notification shall be at the applicant's expense, and shall state where copies of the notice of intention may be examined and obtained and where information regarding the date, time and place of the public hearing may be obtained. Proof of such notification, with a copy of the notice mailed or delivered, shall be filed with the conservation commission.

Within twenty-one days of the receipt by a conservation commission of a written request made by any person and sent by certified mail, said commission shall make a written determination as to whether this section is applicable to any land or work thereon. When such person is other than the owner, notice of any such determination shall also be sent to the owner.

The term "applicant" as used in this section shall mean the person giving notice of intention to remove, fill, dredge or alter.

The term "person" as used in this section shall include any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the commonwealth or political subdivision thereof, administrative agency, public or quasipublic corporation or body, or any other legal entity or its legal representative, agents or assigns.

The term "bogs" as used in this section shall mean areas where standing or slowly running water is near or at the surface during a normal growing season and where a vegetational community has a significant portion of the ground or water surface covered with sphagnum moss (*Sphagnum*) and where the vegetational community is made up of a significant portion of one or more of, but not limited to nor necessarily including all, of the following plants or groups of plants: aster (*Aster nemoralis*), azaleas (*Rhododendron canadense* and *R. viscosum*), black spruce (*Picea mariana*), bog cotton (*Eriophorum*), cranberry (*Vaccinium macrocarpon*), high-bush blueberry (*Vaccinium corymbosum*), larch (*Larix laricina*), laurels (*Kalmia angustifolia* and *K. polifolia*), Leatherleaf (*Chamaedaphne calyculata*), orchids (*Arethusa, Calopogon, Pogonia*), pitcher plants (*Sarracenia purpurea*), sedges (*Cyperaceae*), sundews (*Droseraccae*), sweet gale (*Myrica gale*), white cedar (*Chamaecyparis thyoides*).

The term "coastal wetlands", as used in this section, shall mean any bank, marsh, swamp, meadow, flat or

other lowland subject to tidal action or coastal storm flowage.

The term "freshwater wetlands", as used in this section, shall mean wet meadows, marshes, swamps, bogs, areas where groundwater, flowing or standing surface water or ice provide a significant part of the supporting substrate for a plant community for at least five months of the year; emergent and submergent plant communities in inland waters; that portion of any bank which touches any inland waters.

The term "swamps", as used in this section, shall mean areas where ground water is at or near the surface of the ground for a significant part of the growing season or where runoff water from surface drainage frequently collects above the soil surface, and where a significant part of the vegetational community is made up of, but not limited to nor necessarily include all of the following plants or groups of plants: alders (*Alnus*), ashes (*Fraxinus*), azaleas (*Rhododendron canadense* and *R. viscosum*), black alder (*Ilex verticillata*), black spruce (*Picea mariana*), button bush (*Cephalanthus occidentalis*), American or white elm (*Ulmus americana*), white Hellebore (*Veratrum viride*), hemlock (*Tsuga canadensis*), highbush blueberry (*Vaccinium corymbosum*), larch (*Larix laricina*), cowslip (*Caltha palustris*), poison sumac (*Toxicodendron vernix*), red maple (*Acer rubrum*), skunk cabbage (*Symplocorpus foetidus*), sphagnum mosses (*Sphagnum*), spicebush (*Lindera benzoin*), black gum tupelo (*Nyssa sylvatica*), sweet pepper bush (*Clethra alnifolia*), white cedar (*Chamaecyparis thyoides*), willow (*Salicaceae*).

The term "wet meadows", as used in this section where ground water is at the surface for a significant part of the growing season and near the surface throughout the year and where a significant part of the vegetational community is composed of various grasses, sedges and rushes; made up of, but not limited to nor necessarily including all, of the following plants or groups of plants: blue flag (*Iris*), vervain (*Verbena*), thoroughwort (*Eupatorium*), dock (*Rumex*), false loosestrife (*Ludwigia*), hydrophilic grasses (*Gramincae*), loose-strife (*Lythrum*), marsh fern (*Dryopteris thelypteris*), rushes (*Juncaceae*), sedges (*Cyperaceae*), sensitive fern (*Onoclea sensibilis*), smartweed (*Polygonum*).

The term "marshes", as used in this section, shall mean areas where a vegetational community exists in standing or running water during the growing season and where a significant part of the vegetational community is composed of, but not limited to nor necessarily including all, of the following plants or groups of plants: arums (*Aracea*), bladder worts (*Utricularia*), bur reeds (*Sparganiacea*), button bush (*Cehphalanthus occidentalis*), cattails (*Typha*), duck weeds (*Lemnaceae*), eelgrass (*Vallisneria*), frog bits (*Hydrocharitaceae*), horsetails (*Equisetaceae*), hydrophilic grasses (*Gramineae*), leatherleaf (*Chamaedaphne calyculata*), pickerel weeds (*Pontederiacea*), pipeworts (*Eriocaulon*), pond weeds (*Potamogeton*), rushes (*Juncaceae*), sedges (*Cyperaceae*), smartweeds (*Polygonum*), sweet gale (*Myrica gale*) water milfoil (*Halcragaceae*), water lilies (*Nymphaeaceae*), water starworts (*Callitrichaceae*), water willow (*Decodon verticillatus*).

The conservation commission, selectmen or mayor receiving notice under this section shall hold a public

hearing on the proposed activity within twenty-one days of the receipt of said notice. Notice of the time and place of said hearing shall be given by the hearing authority at the expense of the applicant, not less than five days prior to such hearing, by publication in a newspaper of general circulation in the city or town where the activity is proposed and by mailing a notice to the applicant and to the board of health and the planning board of said city or town. The conservation commission and its agents, officers and employees and the commissioner of environmental protection and his agents and employees, may enter upon privately owned land for the purpose of performing their duties under this section. No conditions shall be imposed, nor shall any determination be rendered by a conservation commission, in reference to this section, unless the conservation commission meets with a quorum present.

If after said hearing the conservation commission, selectmen or mayor, as the case may be, determine that the area on which the proposed work is to be done is significant to public or private water supply, to the groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, to protection of land containing shellfish, to the protection of wildlife habitat or to the protection of fisheries, such conservation commission, board of selectmen or mayor shall by written order within twenty-one days of such hearing impose such conditions as will contribute to the protection of the interests described herein, and all work shall be done in accordance therewith. If the conservation commission, selectmen or mayor, as the case may be, make a determination that the proposed activity does not require the

imposition of such conditions, the applicant shall be notified of such determination within twenty-one days after said hearing. Such order or notification shall be signed by the mayor or a majority of the conservation commission or board of selectmen, as the case may be, and a copy thereof shall be sent forthwith to the applicant and to the department.

If a conservation commission has failed to hold a hearing within the twenty-one day period as required, or if a commission, after holding such a hearing has failed within twenty-one days therefrom to issue an order, or if a commission, upon a written request by any person to determine whether this section is applicable to any work, fails within twenty-one days to make said determination, or where an order does issue from said commission, the applicant, any person aggrieved by said commission's order or failure to act, or any owner of land abutting the land upon which the proposed work is to be done, or any ten residents of the city or town in which said land is located, may, by certified mail and within ten days from said commission's order or failure to act, request the department of environmental protection to determine whether the area on which the proposed work is to be done is significant to public or private water supply, to the groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, to protection of land containing shellfish, to the protection of wildlife habitat or to the protection of fisheries. The commissioner of environmental protection or his designee also may request such a determination within said ten days. The party making any such request shall at the same time send a copy thereof by certified mail to the conservation

commission, board of selectmen or mayor which conducted the hearing hereunder. If such party is other than the applicant, a copy of such request shall also be sent at the same time by certified mail to the applicant. Upon receipt of such request the department shall make the determination requested and shall by written order issued within seventy days of receipt of such request and signed by the commissioner or his designee, impose such conditions as will contribute to the protection of the interests described herein; provided, however, that said department shall notify the applicant within thirty days of the receipt of such request if his application or request is not in proper form or is lacking information or documentation necessary to make the determination. Such order shall supersede the prior order of the conservation commission, board of selectmen or mayor, and all work shall be done in accordance therewith, but in no event shall any work commence until ten days have elapsed following the issuance of said order. At any time prior to a final order of determination by the department, any party requesting a determination may in writing withdraw the request, and such withdrawal shall be effective upon receipt by the department. Notwithstanding the withdrawal, the commissioner or his designee may continue the determination if he notifies all parties within ten days of receipt of the withdrawal. A copy of such order shall be sent to the applicant, to the conservation commission, board of selectmen or mayor which conducted the hearing hereunder. As used in this section the words "wildlife habititat" shall mean those areas subject

to this section which, due to their plant community composition and structure, hydrologic regime or other characteristics, provide important food, shelter, migratory or overwintering areas, or breeding areas for wildlife.

No work proposed in any notice of intention shall be undertaken until the final order, determination or notification with respect to such work has been recorded in the registry of deeds, or if the land affected thereby be registered land, in the registry section of the land court for the district wherein the land lies. If the final order, determination or notification requires the recording of a plan which (1) shows the location of the work, (2) is prepared by a registered professional engineer or land surveyor and (3) is in recordable form, no work proposed in the notice of intention shall be undertaken until such plan has been recorded in the registry of deeds or, if the land affected thereby is registered land, in the registry section of the land court for the district wherein such land lies.

Within twenty-one days of the receipt of a written request, by the applicant or the owner of the property, for a certificate of compliance, the issuer of the final order shall grant such request if the activity, or portions thereof, complies with such final order. The certificate of compliance shall state that the activity, or portions thereof, has been completed in accordance with such order.

Any site where work is being done which is subject to this section shall display a sign of not less than two square feet or more than three square feet bearing the words, "Massachusetts Department of Environmental

Protection File Number. . . . " and the sign shall display the file number assigned to the project.

If the department of environmental protection finds that any proposed work would violate the provisions of chapter ninety-one, it shall proceed immediately to enforce the provisions of said chapter.

The provisions of this section shall not apply to any mosquito control work done under the provisions of clause (36) of section five of chapter forty, of chapter two hundred and fifty-two or on any special act; to maintenance of drainage and flooding systems of cranberry bogs, to work performed for normal maintenance or improvement of land in agricultural use or in aquacultural use; or to any project authorized by special act prior to January first, nineteen hundred and seventy-three.

Within one hundred and twenty days of the effective date of this act, the department, upon the advice and consent of the Commissioner of the Department of Food and Agriculture, shall promulgate rules and regulations pursuant to this section which shall establish definitions for the term "normal maintenance or improvement of land in agricultural, or in aquacultural use", for each agricultural commodity, or where appropriate because of similarities in cultural practices, groups or commodities in the Commonwealth. The department shall create a farmland advisory board to be appointed by the commissioner consisting of five persons one a member of the cooperative extension service, one a member of the USDA soil conservation service, one a member of a municipal

conservation commission who has demonstrated expertise in agricultural issues, and two commercial farmers with expertise in different agricultural commodities to assist the department in the drafting of rules and regulations pursuant to this paragraph.

The notice of intention required in the first paragraph of this section shall not apply to emergency projects necessary for the protection of the health or safety of the commonwealth which are to be performed or which are ordered to be performed by an agency of the commonwealth or a political subdivision thereof. An emergency project shall mean any project certified to be an emergency by the conservation commission of the city or town in which the project would be undertaken, or if none, by the mayor or said city or the selectmen of said town. If the conservation commission, mayor, or selectmen, as the case may be, fail to act favorably within twenty-four hours of receipt of a request for certification of an emergency project, said project may be so certified by the commissioner or his designee. In no case shall any removal, filling, dredging, or alteration authorized by such certification extend beyond the time necessary to abate the emergency.

Notwithstanding the provisions of section fourteen of chapter twenty-one A or any other provision of law to the contrary, the notice of intention required in the first paragraph of this section shall not apply to a maintenance dredging project for which a license has been previously issued within ten years by the division of waterways of the department of environmental protection. A person intending to fill or dredge under such previously issued license shall file a written notice by certified mail to the

conservation commission or if none, to the board of selectmen in a town or mayor of a city in which the land upon which such dredging project is located. Such notice shall contain in the name and address of the applicant.

If the conservation commission, the board of selectmen or mayor fails to notify the applicant at the applicant's address within twenty days of the receipt of such notice of the specific objections to the commencement of such dredging fill or maintenance dredging contemplated under said license, the applicant may commence such work without any further notice to other agencies of the commonwealth. Notwithstanding failure to notify an applicant, as hereinbefore provided, the conservation commission, the board of selectmen or mayor may at any time designate an area at which spoilage from the dredging may be placed and may require the relocation of shellfish before such maintenance dredging takes place.

If the conservation commission, the board of selectmen or mayor cites specific objections to the notice of intention, such conservation commission, board of selectmen or mayor may order a hearing as provided in this section and all other pertinent provisions of this section shall apply.

Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this section or in violation of any order issued under this section shall forthwith comply with any such order or restore such real estate to its condition prior to any such violation; provided, however, that no action, civil or criminal, shall be brought against such person unless such action is commenced

within three years following the recording of the deed or the date of the death by which such real estate was acquired by such person. Any court having equity jurisdiction may restrain, a violation of this section and enter such orders as it deems necessary to remedy such violation, upon the petition of the attorney general, the commissioner, a city or town, an owner or occupant of property which

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The Commonwealth of Massachusetts

SECRETARY OF STATE

REGULATION FILING AND PUBLICATION

1. Regulation Chapter Number and Heading:

   310 CMR 10.00

2. Name of Agency:

   Department of Environmental Protection

3. This document is reprinted from the Code of Massachusetts Regulations and contains the following:

310 CMR 10.00	PART I:	Regulations for All Wetlands
	PART II:	Additional Wetlands for Coastal Wetlands
	PART III:	Additional Wetlands for Inland Wetlands

Under the provisions of Massachusetts General Laws, Chapter 30A, Section 6 and Chapter 233, Section 75, this document may be used as evidence of the original documents on file with the State Secretary.

Compiled as in full force and effect: 1/1/94

A true copy attest:

/s/ Michael J. Connolly
MICHAEL JOSEPH CONNOLLY
Secretary of State

310 CMR 10.00: WETLANDS PROTECTION

PART I: REGULATIONS FOR ALL WETLANDS

Section

10.01: Introduction and Purpose
10.02: Statement of Jurisdiction
10.03: General Provisions
10.04: Definitions
10.05: Procedures
10.06: Emergencies
10.07: Compliance with Massachusetts Environmental Protection Act
10.08: Enforcement Orders
10.09: Severability
10.10: Effective Date
(310 CMR 10.11 through 10.20: Reserved)

PART II: ADDITIONAL REGULATIONS FOR COASTAL WETLANDS

10.21: Introduction
10.22: Purpose
10.23: Additional Definitions for Part II of 310 CMR 10.00
10.24: General Provisions
10.25: Land Under the Ocean
10.26: Designated Port Areas
10.27: Coastal Beaches
10.28: Coastal Dunes
10.29: Barrier Beaches
10.30: Coastal Banks
10.31: Rocky Intertidal Shores
10.32: Salt Marshes
10.33: Land Under Salt Ponds
10.34: Land Containing Shellfish

10.35: Banks of or Land Under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie Anadromous/Catadromous ("Fish Run")
10.36: Variance
10.37: Rare Species
(310 CMR 10.38 through 10.50: Reserved)

PART III: ADDITIONAL REGULATIONS FOR INLAND WETLANDS

10.51: Introduction
10.52: Purpose
10.53: General Provisions
10.54: Bank (Naturally Occurring Banks and Beaches)
10.55: Bordering Vegetated Wetlands (Wet Meadows, Marshes, Swamps and Bogs)
10.56: Land under Water Bodies and Waterways (Under any Creek, River, Stream, Pond, or Lake)
10.57: Land Subject to Flooding (Bordering and Isolated Areas)
10.58: Variance
10.59: Rare Species
10.60: Wildlife Habitat Evaluations
(310 CMR 10.61 through 10.98: Reserved)
10.99: Forms
Appendices: Prefaces to Previous Regulatory Revisions
Protection of Wildlife Habitat: 1987
Rights of Way Management: 1987
1983 Regulatory Revisions
Fees: 1989
Technical Changes: 1992
Maintenance and Improvement of Land in Agricultural Use: 1993

PART I: REGULATIONS FOR ALL WETLANDS

10.01: Introduction and Purposes

(1) Introduction. 310 CMR 10.00 is promulgated by the Commissioner of the Massachusetts Department of Environmental Protection pursuant to the authority granted to him under M.G.L. c. 131, s. 40 (The Wetlands Protection Act, hereinafter referred to as the Act), 310 CMR 10.00 shall complement M.G.L. c. 131, s. 40, and shall have the force of law upon their effective date.

The regulations contained in Part I of 310 CMR 10.00 provide definitions and procedures. Part I of 310 CMR 10.00 pertains to both inland and coastal areas subject to protection under M.G.L. c. 131, s. 40. The regulations contained in Part II and III of 310 CMR 10.00 provide standards for work within those areas. Part II, 310 CMR 10.00 pertains only to coastal areas and Part III of 310 CMR 10.00 pertains only to inland areas. A project may be subject to regulation under Parts I, II and III of 310 CMR 10.00 in which case compliance with *all* applicable regulations is required.

(2) Purpose The Act sets forth a public review and decision-making process by which activities affecting Areas Subject to Protection Under M.G.L. c. 131, s. 40 are to be regulated in order to contribute to the following interests:

- protection of public and private water supply
- protection of ground water supply
- flood control
- storm damage prevention
- prevention of pollution

- protection of land containing shellfish
- protection of fisheries
- protection of wildlife habitat

The purpose of 310 CMR 10.00 is to define and clarify that process by establishing standard definitions and uniform procedures by which conservation commissions and the Department may carry out their responsibilities under M.G.L. c. 131, s. 40.

310 CMR 10.00 is intended solely for use in administering M.G.L. c. 131, s. 40; nothing contained herein should be construed as preempting or precluding more stringent protection of wetlands or other natural resource areas by local by-law, ordinance or regulation.

* * *

10.03: General Provisions

(1) Burden of Proof.

(a) Any person who files a Notice of Intent to perform any work within an Area Subject to Protection Under the Act or within the Buffer Zone has the burden of demonstrating to the issuing authority:

1. that the area is not significant to the protection of any of the interests identified in the Act; or

2. that the proposed work will contribute to the protection of the interests identified in the Act by complying with the general performance standards established by 310 CMR 10.00 for that area.

(b) Any person who requests the issuing authority to regulate work taking place outside an Area Subject to Protection Under the Act and outside the Buffer Zone has the burden of demonstrating to the satisfaction of the issuing authority that the work has in fact altered an Area Subject to Protection Under the Act.

(2) Burden of Going Forward. The burden of going forward means having to produce at least some credible evidence from a competent source in support of the position taken. This burden shall be upon the person contesting the Department's position when the Department has been requested to hold an adjudicatory hearing. In the event that under the provisions of 310 CMR 10.03 two (2) or more persons have the burden of going forward, said burden may be placed on all or any number of them, in the discretion of the hearing officer.

* * *

10.04: Definitions

* * *

Significant means plays a role. A resource area is significant to an interest identified in M.G.L. c. 131, s. 40 when it plays a role in the provision or protection, as appropriate of that interest.

* * *

10.06: Emergencies

(1) Any person requesting permission to do an emergency project shall specify why the project

is necessary for the protection of the health or safety of the citizens of the Commonwealth and what agency of the Commonwealth or subdivision thereof is to perform the project or has ordered the project to be performed. If the project is certified to be an emergency by the conservation commission or the Commissioner, the certification shall include a description of the work which is to be allowed and shall not include work beyond that necessary to abate the emergency. A site inspection shall be made prior to certification.

(2) An emergency certification shall be issued only for the protection of public health or safety.

(3) The time limitation for performance of emergency work shall not exceed 30 days, or 60 days for Immediate Response Actions approved by the Bureau of Waste Site Cleanup (BWSC) of the Department of Environmental Protection in accordance with the provisions of 310 CMR 40.0410, unless written approval of the Commissioner is obtained.

(4) A copy of an emergency certification shall be sent to the Department when it is issued by a conservation commission, and to the conservation commission when it is issued by the Department.

(5) The Department may, on its own motion or at the request of any person, review: an emergency certification issued by a conservation commission and any work permitted thereunder; a denial by a conservation commission of a request for emergency certification; or the failure by a conservation commission to act within 24 hours of a request for emergency certification. Such review shall not operate to stay the

work permitted by the emergency certification unless the Department specifically so orders. The Department's review shall be conducted within seven days of: issuance by a conservation commission of the emergency certification; denial by a conservation commission of the emergency certification; or failure by a conservation commission to act within 24 hours of a request for emergency certification. If certification was improperly granted, or the work allowed thereunder is excessive or not required to protect the health and safety of citizens of the Commonwealth, the Department may revoke the emergency certification, condition the work permitted thereunder, or take such other action as it deems appropriate.

* * *

10.26: Designated Port Areas

(1) Preamble. Land under the ocean in designated port areas is likely to be significant to marine fisheries, storm damage prevention and flood control. In designated port areas, salt marshes, coastal dunes, land under salt ponds, coastal beaches, tidal flats, barrier beaches, rocky intertidal shores and land containing shellfish are not likely to be significant to marine fisheries, storm damage prevention or flood control.

Many species of marine fisheries, including anadromous fish, may inhabit port areas. Anadromous fish may need to be able to pass through port areas to inland spawning areas or to the sea. Other species frequently feed in designated port areas due to high nutrient concentrations in the waters and the tidelands.

Designated port areas, which are portions of developed harbors, are usually located in estuaries. Relatively high concentrations of contaminants, from vessel discharges and point and non-point source discharges, are likely to occur in port areas. Water circulation patterns tend to distribute pollution throughout the estuary, and to other areas which are likely to be significant to other interests of M.G.L. c. 131, s. 40. Land forms in designated port areas have been greatly altered from their natural shape, and coastal engineering structures often have replaced natural protection for upland areas from storm damage and flooding.

Land under the ocean often provides support for such structures. Some proposed activities may alter wave and current patterns so as to affect the stability of such structures or the depths or configurations of navigation channels.

Where a proposed project involves dredging, filling, removing, or altering land under the ocean in designated port areas, the issuing authority shall presume that the area is significant to marine fisheries, storm damage prevention and flood control. These presumptions may be overcome only upon a clear showing that land under the ocean in designated port areas does not play a role in the protection of marine fisheries, storm damage prevention or flood control, or that a salt marsh, coastal dune, land under a salt pond, coastal beach, tidal flat, barrier beach, rocky intertidal shore or land containing shellfish, in designated port areas, does play a role in marine fisheries, storm damage prevention or flood control, and if the issuing

authority makes a written determination to such effect.

When a proposed project in a designated port area is on land under the ocean which is determined to be significant to marine fisheries, the following factors are critical to the protection of such interests:

(a) water circulation, and

(b) water qaulity [sic].

When a proposed project in a designated port area is on land under the ocean which is determined to be significant to storm damage prevention or flood control, the ability of such land to provide support for adjacent coastal or man-made structures is critical to the protection of such interests.

(2) Definition Designated Port Areas means those areas designated in 310 CMR 9.24(2) and 9.24(3) of the Department adopted pursuant to the Waterways law, M.G.L. c. 91.

WHEN LAND UNDER THE OCEAN IN DESIGNATED PORT AREAS IS FOUND TO BE SIGNIFICANT TO THE PROTECTION OF MARINE FISHERIES, STORM DAMAGE PREVENTION OR FLOOD CONTROL, THE FOLLOWING REGULATIONS SHALL APPLY:

(3) Projects shall be designated and constructed, using best practical measures, so as to minimize adverse effects on marine fisheries caused by changes in:

(a) water circulation;

(b) water quality, including, but not limited to, other than natural fluctuations in

the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants.

(4) Projects shall be designed and constructed, using the best practical measures, so as to minimize adverse effects on storm damage prevention or flood control caused by changes in such land's ability to provide support for adjacent coastal banks or adjacent coastal engineering structures.

10.27: Coastal Beaches

(1) Preamble. Coastal beaches, which are defined to include flats, are significant to storm damage prevention, flood control and the protection of wildlife habitat. In addition, tidal flats are likely to be significant to the protection of marine fisheries and where there are shellfish, to land containing shellfish.*

Coastal beaches dissipate wave energy by their gentle slope, their permeability and their granular nature, which permit changes in beach form in response to changes in wave conditions.

Coastal beaches serve as a sediment source for dunes and subtidal areas. Steep storm waves cause beach sediment to move offshore, resulting in a gentler beach slope and greater energy dissipation. Less steep waves cause an onshore return of beach sediment, where it will be available to provide protection against future storm waves.

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*For regulations concerning land containing shellfish see 310 CMR 10.34.

A coastal beach at any point serves as a sediment source for coastal areas downdrift from that point. The oblique approach of waves moves beach sediment alongshore in the general direction of wave action. Thus, the coastal beach is a body of sediment which is moving along the shore.

Coastal beaches serve the purposes of storm damage prevention and flood control by dissipating wave energy, by reducing the height of storm waves, and by providing sediment to supply other coastal features, including coastal dunes, land under the ocean and other coastal beaches. Interruptions of these natural processes by man-made structures reduce the ability of the coastal beach to perform these functions.

A number of birds also nest in the coastal berm, between the toe of a dune and the high tide line. In addition, isolated coastal beaches on small islands are important as haul out areas for harbor seals.

Tidal flats are likely to be significant to the protection of marine fisheries and wildlife habitat because they provide habitats for marine organisms such as polychaete worms and mollusks, which in turn are food sources for fisheries and migratory and wintering birds. Coastal beaches are extremely important in recycling of nutrients derived from storm drift and tidal action. Vegetative debris along the drift line is vital for resident and migratory shorebirds, which feed largely on invertebrates which eat the vegetation. Below the drift line in the lower intertidal zone are infauna (invertebrates such as mollusks and crustacea) which are also eaten by shore birds.

Tidal flats are also sites where organic and inorganic materials may become entrapped and then returned to the photosynthetic zone of the water column to support algae and other primary producers of the marine food web.

When a proposed project involves the dredging, filling, removing, or altering of a coastal beach, the issuing authority shall presume that the coastal beach is significant to the interests specified above. This presumption may be overcome only upon a clear showing that a coastal beach does not play a role in storm damage prevention, flood control, or protection of wildlife habitat, or that tidal flats do not play a role in the protection of marine fisheries or land containing shellfish, and if the issuing authority makes a written determination to such effect.

When coastal beaches are determined to be significant to storm damage prevention or flood control, the following characteristics are critical to the protection of those interests:

(a) volume (quantity of sediments) and form, and

(b) the ability to respond to wave action.

When coastal beaches are significant to the protection of marine fisheries or wildlife habitat, the following characteristics are critical to the protection of those interests:

(a) distribution of sediment grain size,

(b) water circulation

(c) water quality, and

(d) relief and elevation.

When tidal flats are in a designated port area. 310 CMR 10.26(1) through 10.26(4) shall apply. When tidal flats are significant to land containing shellfish, 310 CMR 10.34(1) through 10.34(8) shall apply.

(2) Definitions.

(a) Coastal Beach means unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing man-made structures, when these structures replace one of the above lines, whichever is closest to the ocean.

(b) "Tidal flat" means any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean.

WHEN A COASTAL BEACH IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION, FLOOD CONTROL, OR PROTECTION OF WILDLIFE HABITAT, THE FOLLOWING REGULATIONS SHALL APPLY:

(3) Any project on a coastal beach, except any project permitted under 310 CMR 10.30(3)(a), shall not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any coastal beach or an adjacent or downdrift coastal beach.

(4) Any groin, jetty, solid pier, or other such solid fill structure which will interfere with littoral drift, in addition to complying with 310 CMR 10.27(3), shall be constructed as follows:

(a) It shall be the minimum length and height demonstrated to be necessary to maintain beach form and volume. In evaluating necessity, coastal engineering, physical oceanographic and/or coastal geologic information shall be considered.

(b) Immediately after construction any groin shall be filled to entrapment capacity in height and length with sediment of grain size compatible with that of the adjacent beach.

(c) Jetties trapping littoral drift material shall contain a sand by-pass system to transfer sediments to the downdrift side of the inlet or shall be periodically redredged to provide beach nourishment to ensure that downdrift or adjacent beaches are not starved of sediments.

(5) Notwithstanding 310 CMR 10.27(3), beach nourishment with clean sediment of a grain size compatible with that on the existing beach may be permitted.

WHEN A TIDAL FLAT IS DETERMINED TO BE SIGNIFICANT TO MARINE FISHERIES OR THE PROTECTION OF WILDLIFE HABITAT, THE FOLLOWING REGULATION SHALL APPLY:

(6) In addition to complying with the requirements of 310 CMR 10.27(3) and 10.27(4), a project on a tidal flat shall if water-dependent by designed and constructed, using best available

measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects on marine fisheries and wildlife habitat caused by:

(a) alterations in water circulation,

(b) alterations in the distribution of sediment grain size, and

(c) changes in water quality, including, but not limited to, other than natural fluctuations in the levels of dissolved oxygen, temperature or turbidity, or the addition of pollutants.

(7) Notwithstanding the provisions of 310 CMR 10.27(3) through 10.27(6), no project may be permitted which will have any adverse effect on specified habitat sites or rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.28: Coastal Dunes

(1) Preamble. All coastal dunes are likely to be significant to storm damage prevention and flood control, and all coastal dunes on barrier beaches and the coastal dune closest to the coastal beach in any area are per se significant to storm damage prevention and flood control. Coastal dunes are also often significant to the protection of wildlife habitat.

Coastal dunes aid in storm damage prevention and flood control by supplying sand to coastal beaches. Coastal dunes protect inland coastal areas from storm damage and flooding by storm waves and storm elevated sea levels because such dunes are higher than the coastal

beaches which they border. In order to protect this function, coastal dune volume must be maintained while allowing the coastal dune shape to conform to natural wind and water flow patterns.

Vegetation cover contributes to the growth and stability of coastal dunes by providing conditions favorable to sand deposition.

On retreating shorelines, the ability of the coastal dunes bordering the coastal beach to move landward at the rate of shoreline retreat allows these dunes to maintain their form and volume, which in turn promotes their function of protecting against storm damage or flooding.

A number of birds, most commonly terns and gulls, nest at the base or sides of dunes. In some dune systems other birds also nest in the interdunal area, the species being determined by the plant community structure, topography, and hydrologic regime of the area. In a few dune systems, wet meadows or vernal pool habitats occur, which serve as important feeding areas for a wide variety of bird species.

When a proposed project involves the dredging, filling, removal or alteration of a coastal dune, the issuing authority shall presume that the area is significant to the interests of storm damage prevention, flood control and the protection of wildlife habitat. This presumption may be overcome only upon a clear showing that a coastal dune does not play a role in storm damage prevention, flood control or the protection of wildlife habitat, and if the issuing authority makes a written determination to that effect.

When a coastal dune is significant to storm damage prevention, flood control or the protection of wildlife habitat, the following characteristics are critical to the protection of those interest(s):

(a) The ability of the dune to erode in response to coastal beach conditions;

(b) dune volume;

(c) dune form, which must be allowed to be changed by wind and natural water flow;

(d) vegetative cover;

(e) the ability of the dune to move landward or laterally; or

(f) the ability of the dune to continue serving as bird nesting habitat.

(2) Definition. Coastal dune means any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.

WHEN A COASTAL DUNE IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION, FLOOD CONTROL OR THE PROTECTION OF WILDLIFE HABITAT, THE FOLLOWING REGULATIONS SHALL APPLY:

(3) Any alteration of, or structure on, a coastal dune or within 100 feet of a coastal dune shall not have an adverse effect on the coastal dune by:

(a) affecting the ability of waves to remove sand from the dune;

(b) disturbing the vegetative cover so as to destabilize the dune;

(c) causing any modification of the dune form that would increase the potential for storm or flood damage;

(d) interfering with the landward or lateral movement of the dune;

(e) causing removal of sand from the dune artificially; or

(f) interfering with mapped or otherwise identified bird nesting habitat.

(4) Notwithstanding the provisions of 310 CMR 10.28(3), when a building already exists upon a coastal dune, a project accessory to the existing building may be permitted, provided that such work, using the best commercially available measures, minimizes the adverse effect on the coastal dune caused by the impacts listed in 310 CMR 10.28(3)(b) through 10.28(3)(e). Such an accessory project may include, but is not limited to, a small shed or a small parking area for residences. It shall not include coastal engineering structures.

(5) The following projects may be permitted, provided that they adhere to the provisions of 310 CMR 10.28(3):

(a) pedestrian walkways, designed to minimize the disturbance to the vegetative cover and traditional bird nesting habitat;

(b) fencing and other devices designed to increase dune development; and

(c) plantings compatible with the natural vegetative cover.

(6) Notwithstanding the provisions of 310 CMR 10.28(3) through (5), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

* * *

10.30: Coastal Banks

(1) Preamble. Coastal banks are likely to be significant to storm damage prevention and flood control. Coastal banks that supply sediment to coastal beaches, coastal dunes and barrier beaches are per se significant to storm damage prevention and flood control. Coastal banks that, because of their height, provide a buffer to upland areas from storm waters are significant to storm damage prevention and flood control.

Coastal banks composed of unconsolidated sediment and exposed to vigorous wave action serve as a major continous [sic] source of sediment for beaches, dunes, and barrier beaches (as well as other land forms caused by coastal processes). The supply of sediment is removed from banks by wave action, and this removal takes place in response to beach and sea conditions. It is a naturally occurring process necessary to the continued existence of coastal beaches, coastal dunes and barrier beaches which, in turn, dissipate storm wave energy, thus protecting structures of coastal wetlands landward of them from storm damage and flooding.

Coastal banks, because of their height and stability, may act as a buffer or natural wall, which protects upland areas from storm damage and flooding. while erosion caused by wave action is an integral part of shoreline processes and furnishes important sediment to downdrift landforms, erosion of a coastal bank by wind and rain runoff, which plays only a minor role in beach nourishment, should not be increased unnecessarily. Therefore, disturbances to a coastal bank which reduce its natural resistance to wind and rain erosion cause cuts and gullys in the bank, increase the risk of its collapse, increase the danger to structures at the top of the bank and decrease its value as a buffer.

Bank vegetation tends to stabilize the bank and reduce the rate of erosion due to wind and rain runoff. Pedestrian and vehicular traffic damages the protective vegetation and frequently leads to gully erosion or deep "blow-outs" or unconsolidated banks. Therefore, any project permitted by 310 CMR 10.30 should incorporate, when appropriate, elevate walkways.

A particular coastal bank may serve both as a sediment source and as a buffer, or it may serve only one role.

When a proposed project involves dredging, removing, filling, or altering a coastal bank, the issuing authority shall presume that the area is significant to storm damage prevention and flood control. This presumption may be overcome only upon a clear showing that a coastal bank does not play a role in storm damage prevention or flood control, and if the issuing

authority makes a written determination to that effect.

When issuing authority determines that a coastal bank is significant to storm damage prevention or flood control because it supplies sediment to coastal beaches, coastal dunes or barrier beaches, the ability of the coastal bank to erode in response to wave action is critical to the protection of that interest(s).

When the issuing authority determines that a coastal bank is significant to storm damage prevention or flood control because it is a vertical buffer to storm waters, the stability of the bank, i.e., the natural resistance of the bank to erosion caused by wind and rain runoff, is critical to the protection of that interest(s).

(2) Definition. Coastal Bank means the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

WHEN A COASTAL BANK IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION OR FLOOD CONTROL BECAUSE IT SUPPLIES SEDIMENT TO COASTAL BEACHES, COASTAL DUNES OR BARRIER BEACHES, THE FOLLOWING REGULATIONS SHALL APPLY:

(3) No new bulkhead, revetment, seawall, groin or other coastal engineering structure shall be permitted on such a coastal bank except that such a coastal engineering structure shall be permitted when required to prevent storm damage to buildings constructed prior to the effective date of these regulations or constructed

pursuant to a Notice of Intent filed prior to the effective date of these regulations (August 10, 1978), including reconstructions of such buildings subsequent to the effective date of these regulations, provided that the following requirements are met:

(a) a coastal engineering structure or a modification thereto shall be designed and constructed so as to minimize, using best available measures, adverse effects on adjacent or nearby coastal beaches due to changes in wave action, and

(b) the applicant demonstrates that no method of protecting the building other than the proposed coastal engineering structure is feasible,

(c) protective planting designed to reduce erosion may be permitted.

(4) Any project on a coastal bank or within 100 feet landward of the top of a coastal bank, other than a structure permitted by 310 CMR 10.30(3), shall not have an adverse effect due to wave action on the movement of sediment from the coastal bank to coastal beaches or land subject to tidal action.

(5) The Order of Conditions and the Certificate of Compliance for any new building within 100 feet landward of the top of a coastal bank permitted by the issuing authority under this Act shall contain the specific condition: 310 CMR 10.30(3) of the Wetlands Regulations, promulgated under M.G.L. c. 131, s. 40, requires that no coastal engineering structure, such as a bulkhead, revetment, or seawall shall be permitted on an eroding bank at any time in the future to

protect the project allowed by this Order of Conditions.

WHEN THE COASTAL BANK IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION OR FLOOD CONTROL BECAUSE IT IS A VERTICAL BUFFER TO STORM WATERS, THE FOLLOWING REGULATIONS SHALL APPLY:

(6) Any project on such a coastal bank or within 100 feet landward of the top of such coastal bank shall have no adverse effects on the stability of the coastal bank.

(7) Bulkheads, revetments, seawalls, groins or other coastal engineering structures may be permitted on such a coastal bank except when such bank is significant to storm damage prevention or flood control because it supplies sediment to coastal beaches, coastal dunes, and barrier beaches.

(8) Notwithstanding the provisions of 310 CMR 10.30(3) through (7), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

* * *

10.36: Variance

The Commissioner may waive the application of any regulation(s) in Part II of 310 CMR 10.00 when he finds, after opportunity for an adjudicatory hearing, that:

(1) there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with the regulation(s);

(2) that mitigating measures are proposed that will allow the project to be conditioned so as to contribute to the protection of the interests identified in the Act; and

(3) that the variance is necessary to accommodate an overriding community, regional, state or national public interest; or that it is necessary to avoid an Order that so restricts the use of property as to constitute an unconstitutional taking without compensation.

Procedure.

A request for a variance shall be made in writing and shall include, at a minimum, the following information:

(a) a description of alternatives explored that would allow the project to proceed in compliance with the regulation(s) and an explanation of why each is unreasonable;

(b) a description of the mitigating measures to be used to contribute to the protection of the interests identified in the Act; and

(c) evidence that an overriding public interest is associated with the project which justifies waiver of the regulation(s), or evidence that the Superseding Order so restricts the use of the land that it constitutes an unconstitutional taking without compensation.

The request for a variance shall be sent to the Department by certified mail or hand delivered and a copy thereof shall at the same time be sent by certified mail or hand delivered to the conservation commission and any other parties.

After reviewing the information submitted with the request for a variance and any other information submitted by any party within 21 days of the request, the Commissioner shall issue a decision as to whether to grant the request.

Within ten days of the date of issuance of the Commissioner's decision on the variance, any person specified in 310 CMR 10.05(7)(j) may, according to the procedures specified in that section, request an adjudicatory hearing on the decision. At the adjudicatory hearing, the applicant has the burden of demonstrating that the project meets the criteria necessary for a variance. Other parties to the adjudicatory hearing may introduce evidence either in favor of or opposing the request for a variance.

For projects in which all of the proposed work will be undertaken on land within the boundaries of one city or town, the request for a variance shall not be filed until the applicant first files a Notice of Intent with the Conservation Commission. The Commission shall review the project in accordance with the procedures set forth in Part I of 310 CMR 10.00 and issue an Order of Conditions consistent with Part II of 310 CMR 10.00. Within ten days of the issuance of the Order of Conditions, the applicant may request the Department to issue a Superseding Order. The Department staff shall review the

project in accordance with the procedures set forth in Part I of 310 CMR 10.00 and shall issue a Superseding Order consistent with the provisions of Part II of 310 CMR 10.00. Within ten days of the issuance of the Superseding Order, the applicant may request an adjudicatory hearing on that order and/or a variance under 310 CMR 10.36 according to the procedure previously described.

For projects in which the proposed work will be undertaken on land within the boundaries of more than one city or town, the applicant may file a request for a variance directly with the Commissioner, with a copy to each affected conservation commission. If, after public notice, the Commissioner finds that a project meets the variance criteria, he shall specify which regulation(s) has been waived and what general requirements or conditions must be met to satisfy the above-stated variance criteria. The applicant shall then file a Notice of Intent with the appropriate conservation commissions in accordance with the procedures contained in Part I of 310 CMR 10.00. The conservation commissions shall issue Orders of Conditions consistent with all provisions of Part II of 310 CMR 10.00 except those waived by the Commissioner and containing any additional conditions or requirements imposed by the Commissioner in the variance. The usual procedures contained in Part I of 310 CMR 10.00 for requesting Superseding Orders and adjudicatory hearings remain applicable.

Commentary

310 CMR 10.36, which provides that the Commissioner may waive the application of one or more of the regulations on the basis of overriding public benefit is intended to be employed only in rare and unusual cases. The provision authorizing a variance request directly to the Commissioner for projects on land within more than one city or town is intended to apply to projects that involve functionally related work in several contiguous towns (e.g., transportation and energy transmission facilities) and to provide for a single uniform determination concerning alternative locations and the other variance criteria.

* * *

Massachusetts General Laws,
Chapter 30, Sections 61-62H

§ 61. Determination of impact by agencies; damage to environment; prevention or minimization; definition applicable to this section and section 62

All agencies, departments, boards, commissions and authorities of the commonwealth shall review, evaluate, and determine the impact on the natural environment of all works, projects or activities conducted by them and shall use all practicable means and measures to minimize damage to the environment. Unless a clear contrary intent is manifested, all statutes shall be interpreted and administered so as to minimize and prevent damage to the environment. Any determination made by an agency of the commonwealth shall include a finding describing the environmental impact, if any, of the project and the finding that all feasible measures have been taken to avoid or minimize said impact.

As used in this section and section sixty-two, "damage to the environment" shall mean any destruction, damage or impairment, actual or probable, to any of the natural resources of the commonwealth and shall include but not be limited to air pollution, water pollution, improper sewage disposal, pesticide pollution, excessive noise, improper operation of dumping grounds, impairment and eutrophication of rivers, streams, flood plains, lakes, ponds, or other surface or subsurface water resources; destruction of seashores, dunes, marine resources, underwater archaeological resources, wetlands, open spaces, natural areas, parks, or historic districts or sites. Damage to the environment shall not be

construed to include any insignificant damage to or impairment of such resources.

* * *

§ 62. Definitions

For the purposes of sections sixty-one to sixty-two H, inclusive, the following words shall have the following meanings unless the context otherwise requires: –

"Agency", an agency, department, board, commission or authority of the commonwealth, and any authority of any political subdivision which is specifically created as an authority under special or general law.

"Permit", a permit determination, order or other action, including the issuance of a lease, license, permit, certificate, variance, approval or other entitlement for use, granted to any person, firm or corporation, including trusts, voluntary association or other forms of business organizations by an agency for a project but shall not include a general entitlement to a person to carry on a trade or profession or to operate mechanical equipment which does not depend upon the location of such trade or operation.

"Person", a private person, firm or corporation, or any governmental entity which is not an agency.

"Project", work, project, or activity either directly undertaken by an agency, or if undertaken by a person, which seeks the provision of financial assistance by an agency, or requires the issuance of a permit by an agency but shall not include a grant of aid for medical services or personal support, such as welfare or unemployment

funds, to an individual or a third party on behalf of an individual.

* * *

§ 62A. Notice of intent to apply; forms; certification of need for environmental impact report; application of section

A person applying or intending to apply to an agency for a permit or for financial assistance for a project may, at any time prior to, but, in any event, shall no later than ten days after filing the first application for such permit or assistance notify the secretary of environmental affairs of the nature of the project and of such application, if any, on such forms as said secretary shall prescribe and shall transmit copies of said notification forms to such agency from which a permit or financial assistance is or may be sought. Any agency proposing a project may file said notification forms prior to the development of the project and shall file said forms no later than the secretary of environmental affairs shall by regulation prescribe. Within thirty days after issuance of notice of the receipt of such notification, the secretary shall consult with the person or agency proposing the project and the agency, if any, from which a permit or financial assistance is or may be sought and shall issue a certificate stating whether an environmental impact report is required. If a report is required, the secretary with the cooperation of said person and agency shall, within the above mentioned thirty day period, limit the scope of the report to those issues which by the nature and location of the project are likely to cause damage to the environment. The secretary shall

determine the form, content, level of detail and alternatives required for the report. In the case of a permit application to an agency from a private person for a project for which financial assistance is not sought the scope of said report and alternatives considered therein shall be limited to that part of the project which is within the subject matter jurisdiction of the permit. Any finding required by section sixty-one shall be limited to those matters which are within the scope of the environmental impact report, if any, required by this section.

In the case of a major and complicated project, the secretary of environmental affairs, with the agreement of the agencies and persons who are proposing, providing public financial assistance for or issuing permits for a project subject to sections sixty-two to sixty-two H, inclusive, may establish a specific procedure for evaluation and review of the environmental impacts of said project. This section shall not apply to the placing, maintaining, repairing or relocating of poles, wires, conduits, cables, pipes and associated fixtures by public utility companies under section seventy-one of chapter one hundred and sixty-four and sections twenty-one to twenty-two, inclusive, of chapter one hundred and sixty-six.

* * *

§ 62B. Environmental impact reports; preparation and submission; funding

In the case of projects directly undertaken by an agency, the environmental impact report shall be prepared and submitted by the responsible agency. If two or more agencies are responsible, a joint report shall be

prepared and submitted by the agency designated by the secretary of environmental affairs. In the case of projects which require a permit or financial assistance from an agency, said report shall be prepared and submitted by the person or agency seeking the permit or financial assistance.

Public funds made available for the purpose of design of or planning or undertaking a project subject to sections sixty-two to sixty-two H, inclusive, may be expended for the research, preparation, and publication of the report and expenses incidental thereto, and said funds may be transferred or otherwise may be made available to other agencies designated by the secretary of environmental affairs to evaluate the draft or final report.

An environmental impact report shall contain statements describing the nature and extent of the proposed project and its environmental impact; all measures being utilized to minimize environmental damage; any adverse short-term and long-term environmental consequences which cannot be avoided should the project be undertaken; and reasonable alternatives to the proposed project and their environmental consequences. The secretary shall encourage agencies and persons to commence preparation of reports during the initial planning and design phase of projects. Said report shall be prepared and disseminated to inform the originating or permitting agency, reviewing agencies, the appropriate regional planning commission, the attorney general and the public of the environmental consequences of state actions and the alternatives thereto prior to any commitment of state funds for and prior to the commencement of the project if undertaken by an agency or prior to the issuance of any

permit or grant of financial assistance for the project if undertaken by a person.

* * *

§ 62C. Notice of availability of environmental impact statement; public and agency review

Any environmental impact report shall be submitted to the secretary of environmental affairs who shall issue public notice of the availability of such report.

A reviewing agency or person, and any agency which has jurisdiction by law or special expertise with respect to any environmental impact involved may submit written comments on any draft or final environmental impact report to the secretary of environmental affairs who shall affix any such comments which are timely received to his statement on such reports. Said reports and any comments submitted in review thereof shall be public documents.

No agency shall undertake a project which is not exempted by the provisions of any law and which may cause damage to the environment or grant a permit or financial assistance for such a project until sixty days after the secretary of environmental affairs issues such notice, provided that an agency or person may undertake research, planning, design and other preliminary work necessary to describe and evaluate such projects for the purposes of sections sixty-two to sixty-two H, inclusive.

There shall be a public and agency review period of thirty days from the notice of the availability of any draft

or final report, provided that the secretary of environmental affairs may extend the review period for a draft report on a major and complicated project for a period not to exceed thirty days. A statement of the secretary indicating whether or not in his judgment said report adequately and properly complies with the provisions of sections sixty-two to sixty-two H, inclusive, shall be issued within seven days after the public and agency review period. The approval or disapproval of said secretary of any such report shall not be required.

At least twice per month the secretary shall issue notice of all filings and of the availability of all reports received during the preceding half month, which notice shall be in such form as the secretary shall determine is reasonably suited to informing all interested agencies and persons of the receipt of such filings and the availability of such reports.

* * *

§ 62D. Permit applications; time for agency determination

Agencies shall act on permit applications within ninety days following issue of notice of availability of the final environmental impact report, within ninety days following issue of notice of the determination that a report is not required, or ninety days following the permit application, whichever is latest, unless otherwise provided by law.

* * *

§ 62E. Categories of projects and permits not requiring environmental impact reports; establishment

With the approval of the secretary of the executive office have having jurisdiction over an agency, or if an agency is not within an executive office, with the approval of such agency, the secretary of environmental affairs shall establish general and special categories of projects and permits which shall or shall not require environmental impact reports based upon the scope and duration of potential impacts from the nature, size and location of said projects or portions thereof which require permits.

* * *

§ 62F. Emergencies; commencement of projects; land acquisition

A project may commence prior to compliance with sections sixty-two to sixty-two H, inclusive, if emergency action by a person or agency is essential to avoid or eliminate a threat to public health or safety, or a threat to any natural resources; provided, that wherever practicable, the agency or person shall obtain the prior approval of the secretary of environmental affairs. Following commencement of any such project, the agency or person shall promptly, but in any case within sixty days, commence compliance with the provisions of sections sixty-two to sixty-two H, inclusive.

In the case of an urban renewal project proposed under chapters one hundred and twenty-one A or one hundred and twenty-one B, the specific procedure under

section sixty-two A may permit land acquisition and other actions required for land acquisition to take place prior to the publication of the final environmental impact report provided that the secretary has issued notice of availability of an interim environmental impact report which demonstrates to the satisfaction of said secretary that an urban renewal project may be carried out on the proposed land with appropriate constraints as may be necessary to minimize and prevent damage to the environment.

* * *

§ 62G. Federal environmental impact statements in lieu of reports

In the case of projects for which an environmental impact statement is required under the National Environmental Policy Act of 1969, draft and final federal environmental impact statements may be submitted in lieu of environmental impact reports.

* * *

§ 62H. Action or proceeding alleging improper determination of need for environmental impact report or noncompliance with law; notice; commencement; matters raised

An agency or person intending to commence an action or proceeding alleging an improper determination of whether a project requires the preparation of an environmental impact report under section sixty-two A, shall first provide notice of intention to commence such action

or proceeding within sixty days of issuance of notice of such determination. An agency or person intending to commence an action or proceeding alleging that a final environmental impact report fails to comply with the requirements of sections sixty-two to sixty-two G, inclusive, shall first provide notice of intention to commence such action or proceeding within sixty days of issuance of notice of availability of said final environmental impact report pursuant to section sixty-two C. Said notices of intention shall be in such form as the secretary of environmental affairs shall prescribe, shall identify with particularity the issues to be considered in any such action or proceeding, shall be in lieu of the notice and waiting period required by section seven A of chapter two hundred and fourteen, and shall be provided to the attorney general, the agency or person proposing the project and the secretary of environmental affairs.

Any action or proceeding alleging an improper determination that a project requires the preparation of an environmental impact report under section sixty-two A shall commence no later than thirty days following the first issuance of a permit or grant of financial assistance by an agency or no later than sixty days after issuance of notice of such determination, whichever occurs later, for a private project, or no later than one hundred and twenty days after issuance of notice of such determination for a public project. Any action or proceeding alleging that a final environmental impact report fails to comply with the provisions of section sixty-two and sixty-two G, inclusive, shall commence no later than thirty days following the first issuance of a permit or grant of financial assistance by an agency for a private

project or no later than one hundred and twenty days after issuance of notice of availability of said final environmental impact report under section sixty-two C, for a public project.

No allegation shall be made in any action or proceeding under this section unless the matter complained of was raised at the appropriate point in the administrative review procedures; provided that a matter may be raised upon a showing that it is material and that is was not reasonably possible with due diligence to have raised it during such procedures or that the matter sought to be raised is of critical importance to the environmental impact of the project.

If a court determines that an agency or person proposing a project has knowingly concealed a material fact or knowingly submitted false information in any form or report required under section sixty-two to sixty-two H, inclusive, limits on the manner and time in which actions or proceedings may be commenced shall not apply and the secretary of environmental affairs may require the preparation and review of such forms or reports as may be necessary to correct any deficient form or report.

The secretary of environmental affairs shall, after consultation with other secretaries of executive offices and with agencies not within executive offices, promulgate reasonable rules and regulations to carry out the purposes of sections sixty-two to sixty-two H, inclusive.

* * *

The Commonwealth of Massachusetts

SECRETARY OF STATE

REGULATION FILING AND PUBLICATION

1. Regulation Chapter Number and Heading:

   301 CMR 11.00 – 12.00

2. Name of Agency:

   Executive Office of Environmental Affairs

3. This document is reprinted from the Code of Massachusetts Regulations and contains the following:

   301 CMR 11.00 Massachusetts Environmental Policy Act (MEPA) Regulations

   12.00 Areas of Critical Environmental Concern (ACEC)

Under the provisions of Massachusetts General Laws, Chapter 30A, Section 6 and Chapter 233, Section 75, this document may be used as evidence of the original documents on file with the State Secretary.

Compiled as in full force and effect: 12/1/93

A true copy attest:
/s/ Michael J. Connolly
MICHAEL JOSEPH CONNOLLY
Secretary of State

301 CMR: EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

301 CMR 11.00: MEPA REGULATIONS

Section

11.01: General Provisions
11.02: Definitions and Abbreviations
11.03: Determining the Need for MEPA Review
11.04: Filing the ENF
11.05: Review of the ENF – Consultation
11.06: Decision on the ENF; Scope
11.07: Outline and Content of the EIR
11.08: Review Procedures for Draft EIRs
11.09: Review Procedures for Final EIRs
11.10: Agency Procedures; Section 61 Finding
11.11: Emergency Actions
11.12: Special Provisions for Major and Complicated Projects
11.13: Coordination
11.14: Generic EIRs
11.15: Areas of Critical Environmental Concern
11.16: Segmentation
11.17: Project Changes
11.18: Waiver
11.19: Environmental Monitor; Public Notice of Environmental Review
11.20: Legal Challenges
11.21: Administration; Delegation
11.22: Saturday, Sunday, Legal Holiday
11.23: Special Procedures for EOTC Agencies
11.24: Filing and Circulation of Documents
11.25: Review Thresholds; Categorical Inclusion
11.26: Review Thresholds for Permits
11.27: Review Thresholds for Agency Actions and Financial Assistance
11.28: Environmental Notification Form

11.29: Forms of Notice
11.30: Index

* * *

11.16: Segmentation

In determining review threshold status and conducting project review, the entirety of a proposed project, including likely future expansions, shall be considered, and not separate phases or segments thereof. In determining whether two or more projects are in fact one project, all circumstances are to be considered, including but not limited to time interval between phases, whether the projects, taken together, constitute a common plan or scheme, and whether environmental impacts are separable. Ownership by different entities does not necessarily indicate that two projects are separate. It is the intent of this rule that projects not be segmented or phased to evade or defer review.

COMMONWEALTH OF MASSACHUSETTS
BARNSTABLE, SS SUPERIOR COURT
C.A. NO.

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III, AND BERNICE HICKS,
Plaintiffs

V.

COMMONWEALTH OF MASSACHUSETTS,
Defendant

COMPLAINT

Parties

1. Plaintiffs are Alfred Nelson and Evelyn Nelson, 27 Morris Island Road, Chatham, Barnstable County, Massachusetts.

2. Plaintiffs are Lewis Hicks, III and Bernice Hicks, 40 Dune Drive, Chatham, Barnstable County, Massachusetts.

3. The defendant is the Commonwealth of Massachusetts and its subdivisions, including but not limited to the Department of Environmental Protection (DEP) and Coastal Zone Management (CZM).

Facts

4. The plaintiffs own shorefront property in the Town of Chatham, Massachusetts, bordering Chatham Harbor.

5. The combined 1987 value of plaintiffs' properties exceeds two million dollars.

6. In early 1987, the outer sand bar in Chatham harbor, North Beach, was breached by the sea. The ocean opened a one mile gap in the sand bar. The breach exposed plaintiffs' properties to the direct force of ocean waves and tides. In November, 1988 defendant classified Chatham Harbor as an emergency area.

7. For some time, the sea deposited sand before plaintiffs' beachfront properties. Since spring 1989 the sea has eroded the sand, flooded plaintiffs' property and threatened to destroy their homes.

8. Seawalls are plaintiffs only means of stopping said flood and saving their homes. Without flood protection (seawalls), plaintiffs' lots are without value.

9. The Nelson property is built on the former Chatham Town Dump. Seawalls are necessary to prevent toxic materials and refuse from polluting Chatham Harbor.

10. Defendant has allowed more than fifty property owners with homes bordering Chatham Harbor to construct seawalls. Defendant has reviewed and approved specifications for stone seawalls for said area. Defendant has denied plaintiffs' permission to construct seawalls of any type.

11. The Hicks lot is at sea level and has no flood protection. The sea destroyed 70 feet of the Nelson property in twenty-four hours (November, 1990). Further delay in flood control will result in the irretrievable destruction of plaintiffs' properties and neighboring properties.

12. Defendant's regulations concerning "flood control" (310 CMR 10.01 et seq., pursuant to G.L. c. 131, sec. 40, the "Wetlands Protection Act") frustrate the stated legislative purpose of the Act. The regulations ensure flooding in dune areas.

13. Defendant has classified plaintiffs' properties as dune sand. Defendant's regulations prohibit seawalls in dune sand on the theory that the cure for flooding is further flooding.

14. Defendant is currently taking from three to five years to process flood control requests for dune areas.

15. Defendant's experts admit that without flood control the Commonwealth will lose land valued in excess of ten billion dollars over forty years. The loss is based on a sea level rise of one-and-a-half feet and resulting state-wide loss of 227 acres per year.

16. This figure does not include land loss due to emergency conditions such as the Chatham flood. The flood will continue for forty years. Tides currently run five to eleven feet above pre-breach tides. To date the flood has destroyed ten properties. The Town of Chatham values this loss at eight million dollars.

17. Without seawalls, Chatham will lose a total of 450 acres of land currently assesssed [sic] at 111 million dollars to flooding over forty years. This represents ten percent of the Town's revenues.

18. Plaintiffs have given notice of the claims outlined in this Complaint to the Secretary of the Executive Office of Environmental Affairs.

Count I: Injunctive Relief

19. Plaintiffs restate allegations set forth in paragraphs one through eighteen of this Complaint.

WHEREFORE, plaintiffs pray that this Honorable Court enter the following Orders pursuant to its general superintendency powers and statutes including but not limited to G.L. c. 231A, sec. 2:

PRAYER I: Plaintiffs are allowed to construct the following on properties at Chatham Harbor, Chatham, Barnstable County, Massachusetts:

a) Stone seawalls per specifications of defendant for the Chatham Harbor area, with height twenty feet above beach elevation and depth twelve feet below said elevation; or

b) Steel bulkheads with height twenty feet above beach elevation and depth twelve feet below said elevation.

PRAYER II: Seawalls requested in Prayer I shall remain in place until issues raised in plaintiffs' Complaint are settled or fully adjudicated. Plaintiffs will post a bond of $20,000.00 with this Court to cover the cost of removal of said seawalls. Said bond shall remain posted until issues raised in plaintiffs' Complaint are settled or fully adjudicated.

PRAYER III: That regulations entitled 310 CMR 10.00 et seq. are unconstitutional and without force.

Count II: Unconstitutional Conduct

20. Plaintiffs restate allegations set forth in paragraphs one through eighteen of this Complaint.

21. Defendant's regulatory scheme pursuant to G.L. c. 131, sec. 40 (Wetlands Protection Act) irrationally imposes unfounded, outmoded, and unscientific beliefs upon plaintiffs.

22. Said regulatory scheme relies on theories and presumptions that are illogical, ambiguous, overly broad, and unsuited to furthering the purpose of the Wetlands Protection Act.

23. The regulatory presumption that dune sand and sand transport are significant to flood control is without scientific merit.

24. Said regulatory scheme amounts to the unconstitutional imposition of religious or quasi-religious beliefs by defendant.

25. Said regulatory scheme illogically presumes that flooding is the cure to flooding.

26. Defendant's imposition of said regulatory scheme has lead to the destruction of plaintiffs' property without due process.

WHEREFORE, plaintiffs pray that this Court find said regulations unconstitutional under both the Massachusetts and United States Constitutions, allow plaintiffs the relief requested in Count I of this Complaint, and award plaintiffs damages for the destruction of their property, for the destruction of their property without due process, for expenses incurred in reclaiming said

property, including but not limited to increased costs of seawall construction and landfill, and other proximately caused and consequential damages including but not limited to engineering fees, construction costs, time from business, and attorneys fees and costs.

Count III: Negligence

27. Plaintiffs restate allegations set forth in paragraphs one through twenty-six of this Complaint.

28. Defendant negligently, wrongfully, or maliciously ignored scientific fact in implementing and enforcing the Wetlands Protection Act.

29. Defendant negligently or wrongfully supervised its empoloyees [sic] or representatives, whose acts or omissions lead to the destruction of plaintiffs' properties.

30. Defendant negligently, wrongfully, or maliciously:

(a) undertook to provide plaintiffs with flood control;

(b) ignored plaintiffs' dire situation;

(c) ignored or withheld information concerning the extent of the Chatham flood;

(d) ignored plaintiffs' clear showing that dunes on plaintiffs' property do not provide flood prevention as theorized in the regulations; and

(e) denied plaintiffs flood control knowing that denial would directly and proximately result in the

immediate destruction of plaintiffs' property, the destruction of neighboring properties, and the pollution of Chatham Harbor.

31. Defendant's denial of flood control directly and proximately lead to the destruction of plaintiffs' property.

WHEREFORE, plaintiffs pray that this Honorable Court award plaintiffs damages for the destruction of their property, expenses incurred in reclaiming said property, including but not limited to increased costs of seawall construction and landfill, and other proximately caused and consequential damages including but not limited to engineering fees, construction costs, time from business, and attorneys fees and costs.

Count IV: Taking of Property without Compensation and Regulatory Taking without Compensation

32. Plaintiffs restate allegations set forth in paragraphs one through twenty-six of this Complaint.

33. Defendant's refusal to allow plaintiffs to flood protect their properties has resulted in the destruction of said properties.

34. Defendant's actions amount to an actual taking of plaintiffs' properties.

35. Defendant's refusal to allow plaintiffs to flood protect their properties pursuant to G.L. c. 131, sec. 40 has resulted in the total destruction of plaintiffs' properties.

WHEREFORE, plaintiffs pray that this Honorable Court award plaintiffs damages for the destruction of

their property, and other proximately caused and consequential damages including but not limited to engineering fees, time lost from business, and attorneys fees and costs.

ALFRED NELSON, EVELYN NELSON, LEWIS HICKS, III, AND BERNICE HICKS,
By their attorneys,

/s/ Nicholas B. Soutter
Nicholas B. Soutter
BBO #473740
Paul S. McGovern
BBO #549167
One Washington Street
Suite 208
Wellesley, MA 02181
(17) [sic] 237-6300

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the above document was served upon the defendant Commonwealth of Massachusetts by hand.

Date: 12-24-90 /s/ Nicholas B. Soutter
Nicholas B. Soutter

(LOGO) Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of
Environmental Protection
Southeast Regional Office

William F. Weld
Governor
Daniel S. Greenbaum
Commissioner

May 27, 1992

Nicholas B. Soutter, Esq.
Attorney at Law
One Washington Street
Wellesley, Massachusetts
02181

RE: CHATHAM – Wetlands
File #SE 10-987

Dear Mr. Soutter:

The Department of Environmental Protection is in receipt of your May 15, 1992, letter expressing your understanding that the Department no longer has jurisdiction over the above-referenced filing for failure to issue a Superseding Order of Conditions within 70 days of request (310 CMR 10.05 (7)(f)). The Department differs with this understanding as explained below.

In accordance with 310 CMR 10.05 (7)(f), as noted above, "within seventy (70) days of receipt of a request, the Department shall issue a Superseding Order unless (underline added) either of the following apply, or in the event that both apply, whichever is later:

1. compliance with MEPA is required, in which case the Department shall issue a Superseding

> Order within forty (40) days of the issuance of a statement by the Secretary of the Executive Office of Environmental Affairs that the applicant has complied with MEPA and the regulations promulgated thereunder;"

The above-referenced applicant (Mr. Alfred B. Nelson) has had a previous proposal (Wetlands File No. SE 10-804) before the Department that was subject to MEPA review. Specifically, an Environmental Notification Form (ENF) was filed for Mr. Nelson, EOEA #8133, that received a Certificate from the Secretary of Environmental Affairs on March 14, 1990, stating that the internally armored artificial dune project proposal (Wetlands Filed No. SE 10-804) Requires the preparation of an Environmental Impact Report (EIR). To the best of the Department's knowledge, this Certificate is still valid and an EIR has not been filed with the MEPA office. Therefore, because the current project proposal under Wetlands File No. SE 10-987 for a stone breakwater is essentially the same or similar to the earlier-proposed internally armored artificial dune, the above-mentioned MEPA requirement still applies.

Since MEPA compliance is required before the Department can permit the current project proposal, the Department was awaiting MEPA compliance before issuing a Superseding Order within forty (40) days of the issuance of a statement by the Secretary of the Executive Office of Environmental Affairs that the applicant has complied with MEPA and the regulations promulgated thereunder. Alternatively, the Department could deny the current project proposal without prejudice before MEPA has been complied with and your client could file another

Notice of Intent when the MEPA process has been completed.

Please inform this office if you wish the Department to issue a Superseding Order on your client's current project proposal (Wetlands File No. SE10-987) before the MEPA process has been completed. Please be advised, however, if you choose to have the current project proposal acted upon now, the Department would have no alternative other than to deny the project for failure to comply with MEPA and for non-compliance with the Wetland Regulations.

If you have any questions concerning this matter please contact me, or Jim Mahala, at telephone number (508)946-2800, or at the above-referenced address.

Very truly yours,

/s/ Elizabeth A. Kouloheras
Elizabeth A. Kouloheras, Chief
Wetlands Section

K/JM/lr

cc: Chatham Conservation Commission
549 Main Street
Chatham, MA 02633

Alfred B. Nelson
27 Morris Island Road
Chatham, MA 02633

Carl Dierker, Esq.
DEP-OGC, 3rd Floor

cc: Madelyn Morris, Esq.
Assistant Attorney General
Office of the Attorney General
John W. McCormack Building
Boston, MA 02202

MEPA – Unit

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

(LOGO)
MICHAEL S. DUKAKIS
GOVERNOR

JAMES S. HOYTE
SECRETARY

CERTIFICATE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	:	Breach Project
PROJECT LOCATION	:	Chatham
EOEA NUMBER	:	7345
PROJECT PROPONENT	:	Breach Group
DATE NOTICED IN MONITOR	:	September 27, 1988

Pursuant to the Massachusetts Environmental Policy Act (G.L.,c.30,s.62-62H) and Sections 11.06 of the regulations implementing MEPA (301 CMR 11.00), I hereby determine that the above project requires the preparation of an Environmental Impact Report.

This project is an attempt to protect developed areas in Chatham from the damaging wave climate resulting from the 1987 breach to the Nauset Beach Barrier Beach. Ten home owners were involved. To date three homes have been lost and several other owners are not sure they should move ahead with the expensive solutions. The project requested emergency consideration under MEPA regulation 11.11, which was granted in March. This allows enough action to protect the public. At this time

five or more additional owners are seeking to protect their property and others are trying to stabilize existing beaches.

It is my conclusion that further environmental analysis is required and that these analyses must evaluate all the proposals for the section from the town fishing pier to Morris Island. The options are an integrated solution to the entire section which appears to be threatened for approximately ten years each century, or multiple short segments which may exaggerate the erosion to each segment not so protected. At a minimum the EIR must firmly identify which segments are to be built, the impacts of each to adjacent properties, available mitigation and a commitment to minimize said impacts.

At this time I urge all owners anticipating armoring or other alteration to the bank within the next year to file with the MEPA unit immediately. Upon identifying all proposed actions, I shall anticipate a single EIR to address the issues in this preliminary scope.

SCOPE

I. The EIR must identify the properties where erosion control structures are to be or have been constructed between the fish pier on the north and Morris Island.

II. Describe each of the proposed and existing structures. Include plans for all proposed structures.

III. The EIR must evaluate the impacts of accelerated erosion on properties to either side of each segment. Available mitigation must be evaluated and a mitigation

package proposed. The analysis must be specific for the specific protection designed for each site.

IV. Alternatives, such as nourishment of the offshore sand bar, beaches, or dunes, as a supplement to or replacement for armoring, must be evaluated.

October 27, 1988
DATE

/s/ James S. Hoyte
JAMES S. HOYTE,
SECRETARY

Comments: Chatham Conservation Commission
SOS Foundation, Inc. Petition
CZM
CCP&EDC
John Molander
Darlene Curly
Jacqueline Barett
Jane Powers
Alice & Richard Hiscock

JSH/DES/ds

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss. Superior Court

ALFRED NELSON, EVELEYN NELSON, LEWIS HICKS, III, and BERNICE HICKS, Plaintiffs	
– vs –	No. 90-1712
COMMONWEALTH OF MASSACHUSETTS, Defendants	

BEFORE: Judge Elizabeth Dolan.

APPEARANCES:

NICHOLAS SOUTTER, ESQ.,
PAUL MCGOVERN, ESQ.,
One Washington Street
Wellesley, MA
representing the Plaintiffs.

Madelyn Narrs,
Asst. Attorney General
Attorney General's Office
Barnstable, MA
representing the
Commonwealth of Massachusetts.

BRUCE GILMORE, ESQ.,
1095 Route 6-A
Barnstable, MA
representing the Town of Chatham.

HAROLD GABRIEL – 969-4791
15 Van Wart Path, Newton Centre, MA 02159

* * *

[p. 16] THE COURT: The court has before it its request under essentially General Law Chapter 231, Section 2, and that deals with Count 1, in terms of irreparable harm. It's obvious that there will be immediate irreparable harm to certain home owners and individuals. Apparently, there would be some harm but less immediate. But really, we deal with the likelihood of success on the merits of this case and this complaint as filed by the court and that's really the basis for the injunctive relief.

* * *

COMMONWEALTH OF MASSACHUSETTS

BARNSTABLE, SS SUPERIOR COURT
C.A. 90-1712

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III, AND BERNICE HICKS,
Plaintiffs

V.

COMMONWEALTH OF MASSACHUSETTS
AND TOWN OF CHATHAM,
Defendants

AFFIDAVIT OF ALFRED NELSON

Before me, the undersigned authority, personally appeared Alfred Nelson, who upon oath and after being duly sworn, deposes and says:

1) I am Alfred Nelson. I am a plaintiff in the above-captioned matter. I own coastal property in Chatham, Massachusetts, which is the subject of the above-captioned action.

2) In spring, 1991 I received permission from the Chatham Conservation Commission to place sand at the high water mark of my property. Said permission was granted as a flood control measure.

3) In April and May, 1991, I placed more than 3,100 cubic feet of sand at the high water mark of my property. This was over one hundred feet from my house. This "beach nourishment" cost in excess of $23,700.00

4) The storm of October 30-31, 1991 removed all of said "beach nourishment" from my property. The high water mark is now approximately twenty feet from my

house. My home was damaged in an amount approaching $100,000.00.

Signed under the pains and penalties of perjury.

/s/ Alfred B. Nelson
Alfred Nelson

STATE OF Louisiana
Parish of Caddo

_____, ss. Date: November 7, 1991

Subscribed and sworn to before me, the undersigned Notary Public.

/s/ Teresa L. White
Notary Public

Comm. Exp.: is for life

TERESA L WHITE, Notary Public
Caddo Parish, Louisiana
My Commission is for Life

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of Alfred B. Nelson	Docket No. 90-082 File No. SE 10-804 Docket No. 92-140 File No. SE 10-987

DECISION ON REQUEST FOR VARIANCE

I. ISSUES

* * *

The Department intends to hold an adjudicatory hearing on the Applicant's appeal in accordance with the schedule set forth in Exhibit "A" attached hereto. This schedule will allow the Department to have the information generated by the EIR prior to making its final decision on the proposed project as required by law.

* * *

EXHIBIT "A"

The MEPA office of the Secretary of Environmental Affairs will issue a Certificate on the Draft Environmental Impact Report approximately six weeks after it is filed. It is anticipated that a draft report will be filed soon, and that such a certificate will be issued before the end of 1993.

Within one month from the issuance of the MEPA certificate, the Department will hold a prehearing conference

on the Applicant's appeal of its denial of a Superseding Order of Conditions.

Within one month from the date of the prehearing conference the Applicant will file with the administrative law judge, all pre-filed direct testimony which the applicant intends to introduce in the adjudicatory hearing. Within one month thereafter, the Commonwealth and the Town of Chatham will file all pre-filed direct testimony which they intend to introduce at the adjudicatory hearing.

The hearing will commence within one month from the filing of all pre-filed direct testimony. The hearing record will close fourteen business days from the later to occur of the end of the hearing or the issuance by the MEPA office of a final Environmental Impact Report.

A decision will be issued within sixty days from the date that the hearing record closes.

It is within such administrative law judge's discretion to determine whether the hearing on the appeal of the Superseding Order of Conditions will be bifurcated from the hearing of the appeal of the variance denial.

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of Lewis W. Hicks	Docket No. 92-152 File No. SE 10-1024

DECISION ON REQUEST FOR VARIANCE

I. ISSUES

* * *

The Department intends to hold an adjudicatory hearing on the Applicant's appeal in accordance with the schedule set forth in Exhibit "A" attached hereto. This schedule will allow the Department to have the information generated by the EIR prior to making a final decision on the proposed project as required by law.

* * *

EXHIBIT "A"

The MEPA office of the Secretary of Environmental Affairs will issue a Certificate on the Draft Environmental Impact Report approximately six weeks after it is filed. It is anticipated that a draft report will be filed soon, and that such a certificate will be issued before the end of 1993.

Within one month from the issuance of the MEPA certificate, the Department will hold a prehearing conference

on the Applicant's appeal of its denial of a Superseding Order of Conditions.

Within one month from the date of the prehearing conference the Applicant will file with the administrative law judge, all pre-filed direct testimony which the applicant intends to introduce in the adjudicatory hearing. Within one month thereafter, the Commonwealth and the Town of Chatham will file all pre-filed direct testimony which they intend to introduce at the adjudicatory hearing.

The hearing will commence within one month from the filing of all pre-filed direct testimony. The hearing record will close fourteen business days from the later to occur of the end of the hearing or the issuance by the MEPA office of a final Environmental Impact Report.

A decision will be issued within sixty days from the date that the hearing record closes.

It is within such administrative law judge's discretion to determine whether the hearing on the appeal of the Superseding Order of Conditions will be bifurcated from the hearing of the appeal of the variance denial.

[LOGO]Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of
Environmental Protection
William F. Weld
Governor
Trudy Coxe
Secretary, EOEA
Thomas B. Powers
Acting Commissioner

March 25, 1994

In the Matter of ALFRED B. NELSON	Docket No. 92-140 File No. SE 10-987 Docket No. 93-090 (Variance Denial) CHATHAM
In the Matter of LEWIS W. HICKS	Docket No. 92-152 File No. SE 10-1027 Docket No. 93-089 (Variance Denial) CHATHAM

DECISION ON BIFURCATION

In accordance with the February 24, 1994 Consolidation and Bifurcation Order, the parties are hereby advised that the Department's request with respect to bifurcation of this adjudicatory hearing is GRANTED. Specifically, I have determined that, in the interests of administrative efficiency, it is advisable to hear and decide the permit appeals before commencing that phase of the hearing

pertaining to the variance appeals. Accordingly, the parties are advised that:

1. The Scheduling Order issued on February 24, 1994, including the references therein to the filing of prefiled direct testimony, shall be interpreted to apply solely to the permit appeals phase (hereinafter, "Phase I") of this hearing;

2. A decision with respect to Phase I shall be issued as expeditiously as possible after the close of the record with respect to that pahse;

3. Should the petitioners prevail with respect to Phase I, the variance denials will become moot. Should the petitioners not prevail, the prehearing conference with respect to scheduling the variance appeals phase (hereinafter, "Phase II") of the hearing shall be held as expeditiously as possible.

/s/ M. Kathryn Sedor
M. Kathryn Sedor
Administrative Law Judge

COMMONWEALTH OF MASSACHUSETTS

BARNSTABLE, SS SUPERIOR COURT
C.A. 90-1712

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III, AND BERNICE HICKS,
Plaintiffs

V.

COMMONWEALTH OF MASSACHUSETTS
AND TOWN OF CHATHAM,
Defendants

AFFIDAVIT OF WALTER F. BOHLEN, Ph.D.

Before me, the undersigned authority, personally appeared Walter F. Bohlen, who upon oath and after being duly sworn, deposes and says:

1) I am Walter F. Bohlen. I am a Professor at the Department of Marine Sciences at the University of Connecticut. I am an expert in coastal sediment transport processes.

2) I am familiar with the history of flooding and erosion at Chatham Harbor, Chatham, Massachusetts. I have inspected the plaintiffs' properties and the Chatham Harbor area on several occasions, both before and immediately after the storm of October 30-31, 1991.

3) Plaintiffs' properties suffered serious erosion during the storm of October 30-31, 1991. Storm water passed inland beyond the home of plaintiff Alfred Nelson. The storm destroyed dunes in front of plaintiffs' properties. Sand added to Nelson's property at the high water mark in spring, 1991, is gone. The slope of the beach in front of the properties was reduced, indicated

that most protection provided by the beach against further flooding is lost.

4) Plaintiffs' properties have almost no protection from severe winter storms.

5) Given the ocean forces present at Chatham Harbor, only seawalls can protect plaintiffs' properties.

6) Properly constructed seawalls will protect plaintiffs' properties without causing damage to outlying properties.

7) Every coastal state in the northeastern United States experiences a net loss of coastal sand as (1) more beaches are eroding than not and (2) eroded sand tends to go out sea. Over the last ten years, more than fifty percent of Massachusetts beaches have lost sand.

8) The apparent stability of the minority of beaches is achieved at the cost of erosion from the majority of beaches. As eroding beaches become unable to put more sand into the system, the once "stable" beaches begin to erode.

Signed under the pains and penalties of perjury.

/s/ Walter F. Bohlen
Walter F. Bohlen

STATE OF CONNECTICUT

Groton, ss. Date: November 11, 1991

Subscribed and sworn to before me, the undersigned Notary Public.

/s/ Yolanda D. Beers
Notary Public

Comm. Exp.: 3/31/93
YOLANDA D. BEERS
NOTARY PUBLIC
MY COMM. EXPIRES
MARCH 31, 1993

PHASE I
DRAFT ENVIRONMENTAL IMPACT REPORT
SHORE PROTECTION STRUCTURES
AUNT LYDIAS COVE SOUTH TO
BEACH AND TENNIS CLUB
CHATHAM, MA

JANUARY 1993

PREPARED FOR THE TOWN OF CHATHAM
COASTAL EROSION ADVISORY COMMITTEE

BY

AUBREY CONSULTING, INCORPORATED
SUITE 2-3
350 GIFFORD STREET
FALMOUTH, MA 02540
(508) 457-0810

TABLE OF CONTENTS

	Page
List of Figures	iii
List of Tables	iv
Certificate of ENF	v
1.0 Executive Summary	1
2.0 Introduction	5
2.1 Project History	5
2.2 Purpose and Need for EIR	8
2.3 List of Permits	10
3.0 Regional Evolution	11
3.1 Geologic Evolution of Nauset Barrier Beach	11
3.2 Evolution/History of New Inlet	13
4.0 Existing Conditions	15
4.1 Physical Conditions	15
4.1.1 Tidal Hydrodynamics	15

4.1.2 Wave Climate 18
4.1.3 Storm Surge Frequency 19
4.1.4 Sediment Transport Pathways 19
4.1.5 Shoreline Change Analysis 21
4.1.5a Methodology 21
4.1.5b Results 25
4.2 Wetlands Resource Areas 28
4.3 Land Use 33
4.3.1 Public Access 36
4.3.2 Navigation 37
4.3.3 Existing Structures 39
4.3.3a Description of Structures 43
4.3.3b Adequacy of Structures 44

5.0 Impacts of Existing Structures 47
5.1 Shoreline Change and Sediment Transport 47
5.2 End Effects 50
5.3 Waves 52
5.4 Tidal Currents 52
5.5 Resource Area Changes 52
5.6 Public Access Issues 53

6.0 Environmental Mitigation Alternatives Analysis 55
6.1 Introduction 55
6.2 Description of Alternatives 55
6.2.1 No Action 55
6.2.2 Dune Reconstruction and Planting 55
6.2.3 Beach Nourishment 58
6.2.4 Beach Nourishment with Sand Trapping Structures 59
6.2.5 Repair/Reconstruction of Endangered and Inadequate Structures 60
6.2.6 Improvement of Public Access 62
6.2.7 Acquisition of Shorefront Property 64

7.0 Recommended Plan 65
7.1 Description of Recommended Plan 65
7.1.1 Mitigation for revetment impacts
7.1.2 Optional shoreline management actions
7.2 Analysis of Impacts 66
7.2.1 Local Impacts 66
7.2.2 Regional Impacts 66
7.3 Institutional Considerations/Joint Implementation 67

8.0 Bibliography 68

9.0 Appendices 72

PHASE 1
DRAFT ENVIRONMENTAL IMPACT REPORT
SHORE PROTECTION STRUCTURES
AUNT LYDIAS COVE SOUTH TO
BEACH AND TENNIS CLUB
CHATHAM, MA

LIST OF FIGURES

Page

2-1: Study location showing Chatham Harbor and Pleasant Bay prior to the 1987 breach (location of the inlet breach is shown by the arrow). 6

2-2: Chatham mainland shoreline included within the Environmental Impact Report (Aunt Lydia's Cove to the Beach and Tennis Club). Also, location of the new inlet separating North and South Beach. 7

3-1: Historical evolution of the Nauset barrier beach and Chatham areas over the past 220 years (Giese, 1988). 12

4-1: Sediment transport trends in Chatham Harbor (arrows indicate the direction and relative strength of sediment transport). 17

4-2: Locations of control points used for the aerial photographic analysis of shoreline change. 22

4-3: Baselines used for the aerial photographic analysis of shoreline change. 24

4-4: Mean High Water locations and shoreline change rates for the aerial photographs utilized in the shoreline change analysis. 26

4-5: Erosion and accretion areas between May 1988 and May 1992 (negative areas indicate erosion and positive areas indicate accretion) 27

4-6: Beach profiles at Claflin Landing between March 1987 and June 1988. 29

4-7: Beach profiles at Holway Street between March 1987 and June 1988. 30

4-8: Beach profiles at Chatham Lighthouse between March 1987 and June 1988. 31

4-9: Changes in the dune line from May 1978 to May 1992. 32

4-10: Changes in the Mean High Water line from May 1978 to May 1992. 34

4-11: Changes in the coastal bank from May 1978 to May 1992. 35

4-12: Shoreline sections protected by coastal structures. 41

4-13: Properties protected by coastal structures. 42

5-1: Schematics of various sediment transport scenarios due to inlet position. 49

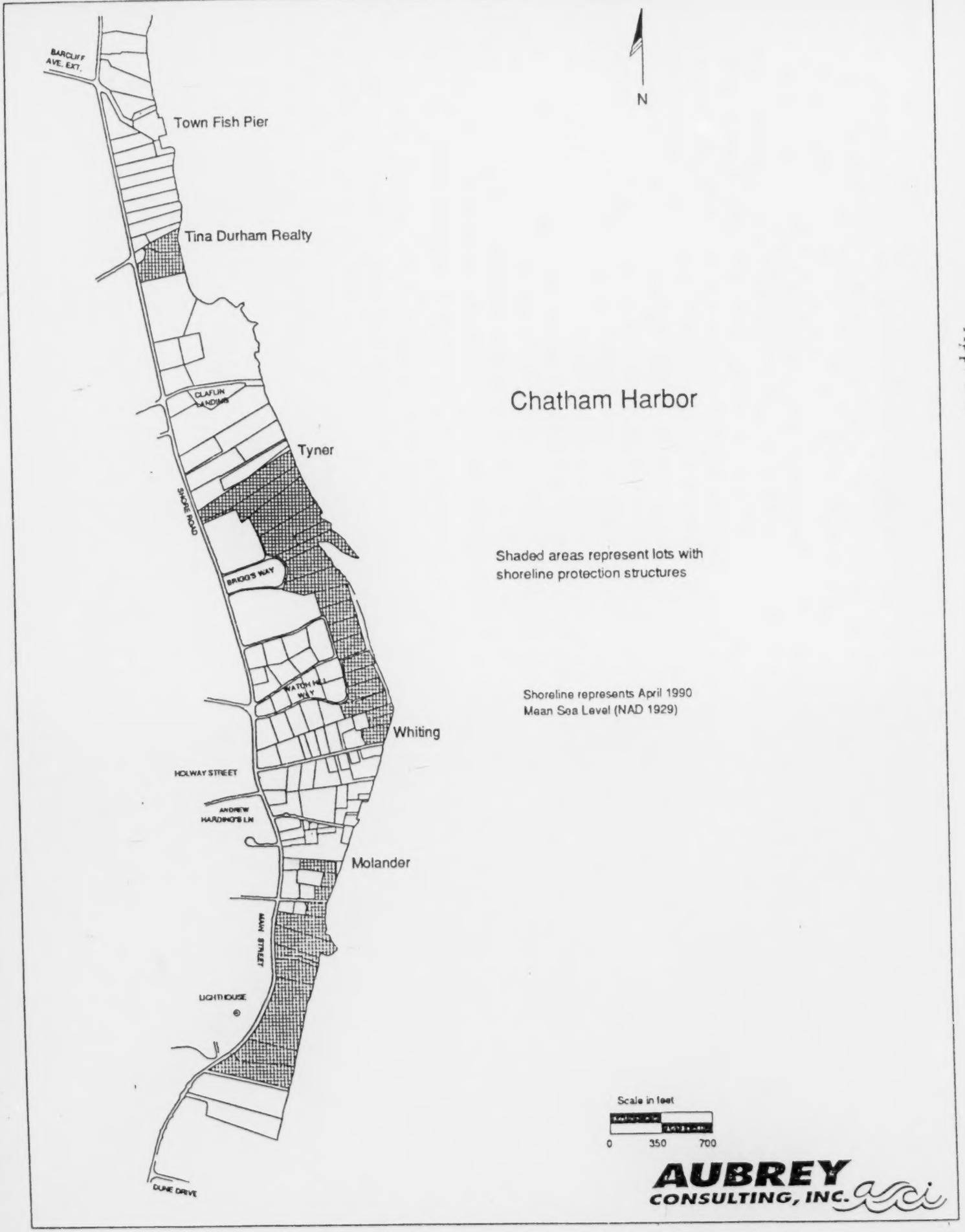

Figure 4-13: Properties protected by coastal structures.

6.0 ENVIRONMENTAL MITIGATION ALTERNATIVES ANALYSIS

6.1 Introduction

Because of the unique character of this Phase I EIR, namely providing environmental information to the permitting process following construction of emergency measures, this EIR follows a slightly different analysis procedure than most. Most EIR's require a thorough assessment of alternatives for the project. However, since this EIR covers only existing seawalls, permitted under emergency action, there is no need to describe alternatives to constructing the seawalls. As agreed to at a conference with regulatory personnel from MEPA and MCZM, held in Boston on 29 June 1992, this EIR addresses mitigation alternatives instead of project alternatives. After analysis of mitigation alternatives, a recommended alternatives mix is provided.

Where possible, we have indicated "trigger conditions," when some occurrence mandates implementation of an option at some time in the future. This adaptive plan provides much more effective management of Chatham Harbor than that possible if all options were to be implemented immediately.

* * *

Appendix 1

MEPA, MCZM and DEP letters

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street, Boston, 02202

[seal]

WILLIAM F. WELD
GOVERNOR
ARGEO PAUL CELLUCCI
LIEUTENANT GOVERNOR
SUSAN F. TIERNEY
SECRETARY

(617) 727-9800
November 25, 1991

Mr. Thomas W. Joy, P.E.
Coastal Engineering Co.
260 Cranberry Highway
Orleans, MA 02653

Re: EOEA#7345/8133 Shorefront Protection – Chatham Breach/Nelson – Artificial Dune – 1991 emergency status

Dear Mr. Joy:

The purpose of this letter is to request an update from you on preparation of the Environmental Impact Report (EIR) that has been required for the construction of certain coastal protection structures in Chatham. As you know, following the breach of the Nauset Barrier in 1987, the Secretary of Environmental Affairs received several emergency requests under the Massachusetts Environmental Policy Act from landowners in Chatham for the construction of coastal protection structures. These structures needed several state agency approvals from DEP/Waterways, DEP/SE/Wetlands, DEP/WPC and

MCZM. These proposals exceeded the MEPA thresholds and required MEPA compliance prior to state action. The Secretary approved those emergency requests under MEPA regulation 301 CMR 11.11.

* * *

As far as the scope of the EIR is concerned, the only change from the 1988 and 1990 Certificates is that, for those properties where emergency structures have already been constructed, alternatives need not be considered. However all properties must be evaluated for mitigation to compensate for the loss of sediments from the eroding bank to the beach and nearshore system. Alternatives analysis is needed for all proposed structures not yet constructed, and any further protection proposed where emergency structures have been constructed (i.e., if protection is planned to a greater height, or if additional toe protection is needed). Perhaps the most important issue to be addressed is the evaluation of the significance of impacts to the identified gaps in the coastal protection and development of a mitigation plan to minimize those impacts. The mitigation will probably be needed until the breach migrates to the south and the specific section of shoreline again becomes an accretion zone.

* * *

Sincerely,

/s/ Janet McCabe
Janet McCabe, Director
MEPA Unit

JM/DES/ds

enclosures: EOEA #7345 Scope – 10/27/88
EOEA #8133/7345 Scope – 3/14/90
EOEA Letter of 12/9/88 re: Emergency Authorizations
DEP/Waterways Application List
EIT Information – 3/29/90
MCZM comments – 3/15/91
DEP/WRP – 3/11/91

cc: EIT
MCZM
DEP/Waterways
DEP/SE/Wetlands
DEP/Boston/Wetlands
DEP/WPC/Boston
Mass. Attorney General
CCC
Chatham Conservation Commission
All Property Owners Referenced

COMMONWEALTH OF MASSACHUSETTS

BARNSTABLE, SS SUPERIOR COURT
C.A. 90-1712

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III, AND BERNICE HICKS,
Plaintiffs

v.

COMMONWEALTH OF MASSACHUSETTS
AND TOWN OF CHATHAM,
Defendants

AFFIDAVITS OF OLE SECHER MADSEN, Sc.D.

Before me, the undersigned authority, personally appeared Ole Secher Madsen, who upon oath and after being duly sworn, deposes and says:

1) I am Ole Secher Madsen. I am a Professor at the Department of Civil Engineering at the Massachusetts Institute of Technology, Cambridge, Massachusetts. I am an expert in coastal sediment transport.

2) Given the ocean forces and conditions present at Chatham, only seawalls offer viable protection for plaintiffs' properties.

3) Seawalls will protect plaintiffs' properties without causing damage to outlying properties.

4) Every coastal state in the northeastern United States experiences a net loss of coastal sand as (1) more beaches are eroding than not and (2) all eroded sand eventually goes out to sea.

5) The apparent stability of the minority of beaches is achieved at the cost of erosion from the majority of

beaches. As eroding beaches become unable to put more sand into the system, the once "stable" beaches begin to erode.

6) Eroding sand moves down as it goes out to sea. When the same sand moves landward, it moves up along the slope of the beach. Even on a gentle slope (10 feet down per hundred feet offshore), one third less sand will return to the beach.

7) Massachusetts wetland regulations assume that the above-stated erosion pattern is a system of flood protection. This is incorrect. Massachusetts' coastal erosion sacrifices sand from eroding beaches without permanently protecting other areas.

8) Massachusetts wetland regulations make a distinction between "dune sand" and "coastal bank" which is extreme and unjustified. It is difficult to distinguish between the materials, particularly along the coast where they tend to be mixed. Any difference in their erosion-resisting properties is insignificant.

9) Making seawall construction dependent on the difference between "dune sand" and "coastal bank" produces gaps between seawalls in flood areas. This leads to "flanking" of the walls by water. Not only is this dangerous, but the dune sand is usually in such small quantities as to have no meaningful impact on flooding.

10) Seawalls do not cause erosion. They prevent sediment behind them from being eroded and they can interfere with the transport of sediment by littoral drift in a small way. Generally these problems are minor because

without the wall flooding will overcome any sand the wall might have blocked.

11) A properly designed and constructed seawall can, if properly maintained, last several centuries or more.

Signed under the pains and penalties of perjury.

/s/ Ole Secher Madsen
Ole Secher Madsen

COMMONWEALTH OF VIRGINIA

York, ss. Date: 12 November 1991

Subscribed and sworn to before me, the undersigned Notary Public.

/s/ Sarah R. Hamrick
Notary Public

Comm. Exp.: 28 February 1994

COMMONWEALTH OF MASSACHUSETTS

BARNSTABLE, ss SUPERIOR COURT
No. 90-1712

ALFRED NELSON, EVELYN NELSON, LEWIS HICKS, III, and BERNICE HICKS,

Plaintiffs,

v.

COMMONWEALTH OF MASSACHUSETTS
THE TOWN OF CHATHAM,

Defendants.

AFFIDAVIT OF BENNO BRENNINKMEYER

I, Benno Brenninkmeyer, do depose and say:

1. My name is Benno Brenninkmeyer. I am an associate professor in the Department of Geology and Geophysics at Boston College. I obtained my Ph.D. in Geological sciences from the University of Southern California. For the past twenty years, I have taught courses in Oceanography, Marine Geology, Coastal Geology, Sedimentation, and Geostatistics at both the graduate and undergraduate levels. I have studied coastal processes for the United States Army Corps of Engineers, the United States Park Service, the National Science Foundation, and the Federal Emergency Management Agency. On behalf of the United States Navy, I have studied the movement of sand and coarser particles on beaches, dunes, inlets,

and the near shore for the past twenty years. I have also led long term expeditions to study sedimentation processes along the coasts of Massachusetts, New Hampshire, Florida, Delaware, North Carolina, Louisiana, California, Oregon, Iceland and Holland. I have included as *Exhibit A* to this affidavit, a copy of my resume which more fully details my education and experience.

* * *

3. The Massachusetts coastline is a valuable and scarce resource. Indeed, if all the people who live within an hour's drive were to go down to the beach on any given day, they would have a total of eleven square inches to spread their blanket or towel.

4. This scarce resource is in danger. Eleven percent of the Massachusetts coastline is critically eroding; eighty-six percent is eroding to a lesser extent. This erosion can be exacerbated if coastal property owners place structures on their properties that interfere with natural coastal processes. I shall describe these processes below.

* * *

Signed under the penalties of perjury this 28th day of February, 1992.

/s/ Benno Brenninkmeyer
Benno Brenninkmeyer

LOGO Commonwealth
of Massachusetts

FORM 300
[SEAL]
Chatham Beach & Tennis Club Notice of Intent (excerpt) File NO. SE-10 919

City/Town Chatham

Assistant Chatham Beach & Tennis Club

Notice of Intent
Under the
Massachusetts Wetlands Protection Act,
G.L. c. 131, § 40
and
Application for a Department of the Army Permit

Part I: General Information

1. Location: Street Address Main Street Lot Number 73, 74 Assessors Map 16B

2. Project: Type To alter Description To reconstruct and replace existing rock revetment for shorefront protection

3. Registry: County Barnstable Current Book 458 & Page 533

   Certificate (if Registered Land) ____

4. Applicant Chatham Beach & Tennis Club Tel. 945-0999
   c/o E. Melson Webster

   Address 90 Old Harbor Road Chatham, MA 02633

5. Property Owner same as applicant Tel. ____

   Address _____

6. Representative Coastal Engineering Co., Inc. Tel. 255-6511

   Address 260 Cranberry Highway Orleans, MW 02653

7. a. Have the Conservation Commission and the Department's Regional Office each been sent, by certified mail or hand delivery, 2 copies of completed Notice of Intent, with supporting plans and documents?

   Yes [X] No [ ]

   b. Has the fee been submitted?

   [X] Yes [ ] No

   c. Total Filing Fee Submitted $670.00

   d. City/Town Share of Filing Fee $347.50
   (sent to City/Town)
   State Share of Filing Fee $322.50
   (½ of fee in excess of $25, set to DEP)

   e. Is a brief statement attached indicating how the applicant calculated the fee? [X] Yes [ ] No

8. Have all obtainable permits, variances and approvals required by local by-law been obtained?

   Yes [X] No [ ]

Obtained:	Applied For:	Not Applied For:
	None applicable at this time.	

9. Is any portion of the site subject to a Wetlands Restriction Order pursuant to G.L. c. 131, § 40A or G.L. c. 130, § 105? Yes [ ] No [X]

10. List all plans and supporting documents submitted with this Notice of Intent.

Identifying Number/Letter	Title, Date
R-1	Proposed Shorefront Protection 1/2/91

11. Check those resource areas within which work is PROPOSED:

(a) [ ] Buffer Zone

(b) Inland:

[ ] Bank*
[ ] Bordering Vegetated Wetland*
[ ] Land Under Water Body & Waterway*

Land Subject to Flooding
[ ] Bordering
[ ] Isolated

(c) Coastal:

[ ] Land Under the Ocean*
[ ] Coastal Beach*
[ ] Barrier Beach
[ ] Rocky Intertidal Shore*
[ ] Land Under Salt Pond*
[ ] Fish Run*

[ ] Designated Port Area*
[XX] Coastal Dune
[XX] Coastal Bank
[ ] Salt Marsh*
[ ] Land Containing Shellfish*

---

* Likely to involve U.S. Army Corps of Engineers concurrent jurisdictions. See General Instructions for Completing Notice of Intent.

CHATHAM
North Chatham
Great Hill
Lovers Lake
Tidal Flat
Old Cems
Emery Pond
Chatham Municipal Airport
Peoples Cem
Gravel Pit
Tern Island
Gravel Pit Cranberry Bog
Union Cem
Seaside Cem
Perch Pond
White Pond
Blue Pd
Black Pd
Bear Pond
Black Pond
Aunt Lydias Cove
West Chatham
Chatham
Oyster Pond
Long Pt
Stetson Cove
Little Mill Pond
Mill Pond
Oyster Pond River
The Neck
Chatham Lighthouse
Toms Neck
Mitchell River
Sears Pt
Stage Harbor
Stage Island
Harding Beach
Harding Beach Pt
Morris Island
Quitnesset
Radio Tower
Light
CHATHAM ROADS
CHATHAM HARBOR
NANTUCKET
Tidal Flat
CHATHAM QUADRANGLE
App. 185

TOWN OF CHATHAM

Conservation Commission

FINDINGS ON APPLICATION FOR PERMIT UNDER WETLANDS PROTECTION BY-LAW

FORM 505
FILE NUMBER
SE -10 919

DATE OF ISSUANCE
July 25, 1991

AMENDED ORDER OF CONDITIONS

APPLICANT: Chatham Beach and Tennis Club

ADDRESS: c/o Melson Webster
90 Old Harbor Road
Chatham, Mass. 02633

OWNER: _____

(If other than applicant)

ADDRESS: _____

LOCATION OF WORK: Lots 73 & 74 Main Street, Chatham

After public hearing in accordance with open meeting law M.G.L. Ch. 39, s. 23B, closed on February 6, 1991, the Chatham Conservation Commission, in accordance with the Town of Chatham Wetlands By-Law finds:

[X] Permit is granted – work may proceed;

[ ] Permit is denied;

Conservation Commission:

/s/ Douglas B. Wells
/s/ Stuart Moore
/s/ Paul Chamberlin
/s/ Illegible

EXHIBIT 17

Saving The American Beach:
A Position Paper by Concerned
Coastal Geologists

SAVING THE AMERICAN BEACH:

A POSITION PAPER BY

CONCERNED COASTAL GEOLOGISTS

Results of the Skidaway Institute of Oceanography Conference on America's Eroding Shoreline: The need for geologic input into shoreline management, decisions and strategy

25-27 March, 1981

Savannah, Georgia

Conveners:

Dr. Orrin H. Pilkey, Jr., Duke University, Durham, N.C. 27708

Dr. James D. Howard, Skidaway Inst. of Oceanography, Savannah, Ga. 31406

Participants:

Dr. Benno Brenninkmeyer, Boston College, Chestnut Hill, Ma. 02167

Dr. Robert W. Frey, University of Georgia, Athens, Ga. 30602

Dr. Albert C. Hine, University of South Florida, St. Petersburg, Fla. 33701

Dr. John C. Kraft, University of Delaware, Newark, Del. 19711

Dr. Robert Morton, Bureau of Economic Geology, Austin, Tx. 78712

Dr. Dag Nummedal, Louisiana State University, Baton Rouge, La. 70803

Dr. Harold Wanless, University of Miami, Miami, Fla. 33139

* * *

4. Economic and Political Alternatives

Prevent the use of public funds for redevelopment after the "next" storm –

Destruction of shoreline development by a storm is essentially the only way that artificial stabilization can be halted or reversed. Thus storms on the one hand sow tragedy and destruction but on the other hand, they offer a golden opportunity to reverse beach management strategies that have failed.

Dauphin Island, Alabama has been affected by 20 hurricanes during this century. Three (1916, 1947, 1979) provided maximum damage at the same place, a location controlled by nearshore bathymetry which focuses storm wave energy. The taxpayer paid millions of dollars in Flood Insurance payments for Dauphin Island buildings that were destroyed by Hurricane Frederic in 1979. We taxpayers have just commited well over 50 million dollars to build a new bridge and to reestablish the major development of Dauphin Island at this most senseless of all locations.

There is immediate need for measures to prevent redevelopment after storms. No longer should local, state, and federal governments expend public funds in redevelopment; on the contrary, these governments should assume responsibility for the protection of the

public (as opposed to the private) interest, not to recreate an untenable situation or to guarantee recurrent destruction of such properties.

* * * * *

1. People are directly responsible for the "erosion problem" by constructing buildings near the beach. For practical purposes, there is no erosion problem where there are no buildings or farms.

* * *

Restatement (Second) of Torts, Section 822, Comment g

* * *

Intentional invasions – unreasonableness. Intentional invasions are defined in § 825. The rules for determining when an intentional invasion is unreasonable are stated in §§ 826-831. The special application of these rules to the case in which the defendant's conduct was solely for the purpose of causing the invasion is found in § 829.

Not every intentional and significant invasion of a person's interest in the use and enjoyment of land is actionable, even when he is the owner of the land in fee simple absolute and the conduct of the defendant is the sole and direct cause of the invasion. Life in organized society and especially in populous communities involves an unavoidable clash of individual interests. Practically all human activities unless carried on in a wilderness interfere to some extent with others or involve some risk of interference, and these interferences range from mere trifling annoyances to serious harms. It is an obvious truth that each individual in a community must put up with a certain amount of annoyance, inconvenience and interference and must take a certain amount of risk in order that all may get on together. The very existence of organized society depends upon the principle of "give and take, live and let live," and therefore the law of torts does not attempt to impose liability or shift the loss in every case in which one person's conduct has some detrimental effect on another. Liability for damages is imposed in those cases in which the harm or risk to one is greater than he ought to be required to bear under the circumstances, at least without compensation. (See

§ 829A). In respect to unintentional invasions of another's interests, certain broad general principles of liability have been developed. These principles are embodied in the rules governing liability for negligent, reckless and abnormally dangerous conduct and apply to unintentional invasions of interests in the use and enjoyment of land as well as to other interests. In respect to intentional invasions of interests, however, there are no broad general principles of liability applicable to different types of interests. In respect to certain types of interests, such as those in bodily security and in the exclusive possession of land, the law has developed strict rules of liability for intentional invasions, qualified by specific privileges. In respect to interests in the use and enjoyment of land, however, the law has developed a broader, more indefinite and more comprehensive, rule of liability for intentional invasions. This rule is expressed in terms of unreasonableness and, as stated in this Section, requires that an intentional invasion be unreasonable before one is liable for causing it.

* * *

Massachusetts General Laws,

Chapter 231A, Sections 1 – 3

§ 1. Power to make declaratory determination; jury questions

The supreme judicial court, the superior court, the land court and the probate courts, within their respective jurisdictions, may on appropriate proceedings make binding declarations of right, duty, status and other legal relations sought thereby, either before or after a breach or violation thereof has occurred in any case in which an actual controversy has arisen and is specifically set forth in the pleadings and whether any consequential judgment or relief is or could be claimed at law or in equity or not; and such proceeding shall not be open to objection on the ground that a merely declaratory judgment or decree is sought thereby and such declaration, when made, shall have the force and effect of a final judgment or decree and be reviewable as such; provided, that nothing contained herein shall be construed to authorize the change, extension or alteration of the law regulating the method of obtaining service on, or jurisdiction over, parties or affect their right to trial by jury. When a declaration of right, or the granting of further relief based thereon, shall involve the determination of issues of fact triable by a jury as of right and as to which a jury trial is duly claimed by the party entitled thereto, or issues which the court, in accordance with the practice of courts of equity, considers should be tried by a jury, such issues may be submitted to a jury in the form of questions, with

proper instructions by the court, whether a general verdict be required or not.

---

§ 2. Controversies to which declaratory judgment procedure is applicable

The procedure under section one may be used to secure determinations of right, duty, status or other legal relations under deeds, wills or written contracts or other writings, constituting a contract or contracts or under the common law, or a charter, statute, municipal ordinance or by-law, or administrative regulation, including determination of any question of construction or validity thereof which may be involved in such determination. Said procedure under section one may be used in the superior court to enjoin and to obtain a determination of the legality of the administrative practices and procedures of any municipal, county or state agency or official which practices or procedures are alleged to be in violation of the Constitution of the United States or of the constitution or laws of the commonwealth, or are in violation of rules or regulations promulgated under the authority of such laws, which violation has been consistently repeated; provided, however, that this section shall not apply to the governor and council or the legislative and judicial departments. For the purpose of this section practices or procedures mean the customary and usual method of conducting municipal, county, state agency or official business.

The foregoing enumeration shall not limit or restrict the exercise of the general powers conferred in section one in any proceeding where declaratory relief is sought, in which a judgment or decree will terminate the controversy or remove an uncertainty.

---

§ 3. Grounds for refusing declaratory judgment

The court may refuse to render or enter a declaratory judgment or decree where such judgment or decree, if rendered or entered, would not terminate the uncertainty or controversy giving rise to the proceedings or for other sufficient reasons. The reasons for such refusal shall be stated in the record. The failure to exhaust administrative relief prior to bringing an action under section one shall not bar the bringing of such action if the petition for declaratory relief is accompanied by an affidavit stating that the practice or procedure set forth pursuant to the provisions of section two is known to exist by the agency or official therein described and that reliance on administrative relief would be futile. For the purposes of this section practice or procedure means the customary and usual methods of conducting agency or official business.

(2)

Supreme Court, U.S.
FILED
AUG 23 1994
OFFICE OF THE CLERK

94-143

No. 94-

IN THE

Supreme Court of the United States

OCTOBER TERM, 1994.

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS III, AND BERNICE HICKS,
Petitioners,

v.

COMMONWEALTH OF MASSACHUSETTS AND
TOWN OF CHATHAM,
Respondents.

ON A PETITION FOR A WRIT OF CERTIORARI TO THE
MASSACHUSETTS SUPREME JUDICIAL COURT

BRIEF IN OPPOSITION FOR THE COMMONWEALTH OF MASSACHUSETTS

SCOTT HARSHBARGER
Attorney General
of Massachusetts

WILLIAM L. PARDEE*
MADELYN MORRIS
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1 Ashburton Place
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(617) 727-2200
**Counsel of Record*

BEST AVAILABLE COPY

109 pp

Question Presented

May the Petitioners maintain their taking claim where the Massachusetts agency has not yet issued a final decision on their permit and variance applications, where the agency proceedings are neither futile nor excessively long, and where the Petitioners have had the full use of the property throughout the administrative process?

Table of Contents.

Statement of the Case 2

Summary of the Argument 7

Argument 9

I. Consistently With Long-Standing Precedent, the Massachusetts Courts Correctly Held That the Nelsons Could Not Maintain Their Taking Claim Until They Obtained A Final Decision On Their Permit And Variance Applications. 9

II. Consistently With Well-Established Precedent, The Massachusetts Courts Correctly Concluded That It Was Not Futile For The Nelsons To Pursue Their Administrative Remedies. 11

III. Since the Administrative Process Has Not Been Shown To Be Futile, The Nelsons Cannot Avoid The Final Decision Requirement. 14

A. The Nelsons Cannot Establish A Taking Solely Because It Takes Time To Complete The Permitting Process. 14

B. The Nelsons Cannot Rely On Coastal Flooding To Establish A Taking By Physical Invasion. 16

IV. The Massachusetts Courts Properly Handled The Nelsons' Facial Challenge To The Regulations. 18

Conclusion 19

Table of Authorities.

Cases.

1902 Atlantic Ltd v. United States,
26 Cl. Ct. 575 (1992) 16

Agins v. Tiburon, 447 U.S. 255 (1980) 15

California v. Taylor, 353 U.S. 553 (1957) 17

Commonwealth v. Alger, 61 Mass. 53 (1851) 18

Commonwealth v. Tewksbury,
52 Mass. (11 Metc.) 55 (1846) 18

Dolan v. City of Tigard, ___ U.S. ___,
1994 Westlaw 876693 (1994) 11

Dufau v. United States, 22 Cl. Ct. 156 (1990) 16

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932 F.2d 51 (1st Cir. 1991),
cert. denied, 112 S.Ct. 192 (1991) 11, 19

Hodel v. Virginia Surface Mining and Reclamation Ass'n, 452 U.S. 264 (1981) 10

Kinzli v. City of Santa Cruz,
818 F.2d 1449 (9th Cir. 1987),
cert. denied, 484 U.S. 1043 (1988) 13

Lawn v. United States, 355 U.S. 339 (1968) 17

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Nectow v. Cambridge, 277 U.S. 183 (1928) 19

Pennel v. San Jose, 485 U.S. 1 (1988) 19

Pumpelly v. Green Bay Co., 80 U.S. (13 Wall.) 166 (1871) 17, 18

Sequin v. City of Sterling Heights, 968 F.2d 584 (6th Cir. 1992) 11

Smithfield Concerned Citizens v. Town of Smithfield, 907 F.2d 239 (1st Cir. 1990) 19

Southern Pacific v. City of Los Angeles, 922 F. 2d 498 (9th Cir. 1990), *cert. denied*, 112 S.Ct. 382 (1991) 19

Southview Associates Ltd. v. Bongartz, 980 F.2d 84 (2d Cir. 1992), *cert. denied*, 113 S.Ct. 1586 (1993) 10, 11

Traweek v. City & County of San Francisco, 920 F.2d 589 (9th Cir. 1990) 11

United States v. Lynah, 188 U.S. 445 (1903) 17, 18

United States v. Riverside Bayview Homes, 474 U.S. 121 (1985) 7, 10

Williamson County Regional Planning Comm'n v. Hamilton Bank of Johnson City, 473 U.S. 172 (1985) 10, 13, 15, 19

Wilson v. Commonwealth, 413 Mass. 352, 597 N.E.2d 43 (1992) 14, 16

Massachusetts Statutes and Regulations.

General Laws of Massachusetts

M.G.L. c. 30A, § 14 4

M.G.L. c. 131, § 40 2, 5

M.G.L. c. 30, §§ 62-62H 4

Code of Massachusetts Regulations

301 C.M.R. 11.01(4) 4

310 C.M.R. 10 4

310 C.M.R. 10.06 3, 6

310 C.M.R. 10.20 5

310 C.M.R. 10.28 5, 14

310 C.M.R. 10.30 5

310 C.M.R. 10.36 3, 14

NO. 94-

IN THE

Supreme Court of the United States

OCTOBER TERM, 1994.

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Petitioners,

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COMMONWEALTH OF MASSACHUSETTS AND
TOWN OF CHATHAM,
Respondents.

ON A PETITION FOR A WRIT OF CERTIORARI TO THE
MASSACHUSETTS SUPREME JUDICIAL COURT

BRIEF IN OPPOSITION FOR THE COMMONWEALTH OF MASSACHUSETTS

The Commonwealth opposes the Petition for a Writ of Certiorari, because the decision of the Massachusetts Appeals Court, remitting the Petitioners to their administrative remedies, in no way conflicts with established law with respect to any federal question, and because there is no reason why this Court should review the Petitioners' claims before the Commonwealth has reached a final decision on the Petitioners' application to build seawalls.

Statement of the Case

The Petitioners Alfred Nelson, Evelyn Nelson, Lewis Hicks III and Bernice Hicks (the "Nelsons"), own residential properties located on a coastal dune in Chatham Massachusetts.[1] (Respondent's Appendix ["Resp. App."] 64). In January 1987, a breach in the barrier beach left these properties exposed to the ocean. (Resp. App. 65). About two and a half years later, the Nelsons applied for permits[2] under the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40, to build stone seawalls to protect their properties.[3] (Resp. App. 60). They

---

[1] Mr. and Mrs. Nelson own two parcels of land, and Mr. and Mrs. Hicks own a non-abutting parcel 1000 feet south of the lots owned by Mr. and Mrs. Nelson. (Resp. App. 65-66).

[2] Mr. and Mrs. Nelson did not begin the permitting process until June 22, 1989, two and a half years after the breach. Mr. and Mrs. Hicks did not file a permit application until February 5, 1990, more than three years after the breach. Petitioners' Appendix ("Pet. App." 25). These initial permit applications were withdrawn. The permit applications that are the subject of the ongoing administrative proceedings were commenced by Mr. and Mrs. Nelson on December 23, 1991 and by Mr. and Mrs. Hicks on May 15, 1992. (Pet. App. 34).

[3] The Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40, promotes certain public interests including flood control and storm damage protection. The Act requires a permit for the construction of coastal engineering structures on coastal dunes or banks. This requirement allows the Massachusetts Department of Environmental Protection the opportunity to determine whether a dune or bank is significant to any of the Act's protected interests, including flood control and storm damage prevention, and, if so, whether the proposed project would adversely

subsequently applied for variances from the requirements of the Wetlands Regulations. (Resp. App. 80). *See* 310 C.M.R. 10.36.

In 1990 and again in 1992, the Massachusetts Department of Environmental Protection (the "Department") issued initial decisions denying the Nelsons permission to build seawalls. (Pet. App. 31-33, 45-48, 52-59, 72-76). The Department determined that because they would aggravate flooding and impose storm damage on adjacent properties, seawalls could not be permitted under the Wetlands Regulations. Consequently, the Department suggested that the Nelsons use other protective techniques.[4] (Petitioner's Appendix ["Pet. App."] 31-33, 45-48, 55-59, 72-76).

In issuing these permit denials, the Department advised the Nelsons of their right to appeal by requesting an adjudicatory hearing. (Resp. App. 54).[5] The Department also informed

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affect any of these interests. To prevent such adverse effects, the Wetlands Regulations allow the Department to issue orders ensuring that the proposed structures complies with the performance standards set forth therein. 310 C.M.R. 10.06.

[4] Alternative flood control techniques include beach nourishment, the construction of groins and jetties, and raising the houses. (Resp. App. 76).

[5] If the Nelsons did not appeal the initial permit denials, these denials would become the final decisions of the Department. Otherwise the Department would issue final decisions following the adjudicatory hearing. The Nelsons would have the right to obtain judicial review of the Department's final decisions in accordance with the Massachusetts Administrative Procedures Act, M.G.L. c. 30A, § 14.

them that they would have to evaluate the environmental impacts of the proposed seawalls in accordance with the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 62-62H ("MEPA"), before the Department could make a final decision on their project. (Pet. App. 55-59, 72-76).[6]

Despite this notice, the Nelsons appealed the Department's permit, without taking any action to move the administrative process to a conclusion. From 1990 to 1992, the Nelsons neither commenced the environmental review process required by MEPA nor challenged the requirement that they prepare an environmental impact report. (Pet. App. 21, 60). Faced with this inaction, the Department could not issue a final decision permitting their project. 301 C.M.R. 11.01(4); 310 C.M.R. 10.

Rather than pursue their administrative remedies, the Nelsons commenced this action in 1990 to challenge the Department's permit denials.[7] (Pet. App. 139-146). As

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[6] MEPA, M.G.L. c. 30, §§ 62-62H, mandates the preparation of an environmental impact report ("EIR") evaluating the environmental impacts of alternative flood control measures before the Department allows certain coastal engineering structures. This report is intended to inform the Department of the environmental impacts of the proposed structure before it issues a final permit decision. 301 C.M.R. 11.01(4).

[7] At the time they commenced this action, the Nelsons had not even applied for a variance. (Resp. App. 79). The Nelsons did not apply for variances until September, 1993, after they were urged to do so by the Massachusetts Appeals Court. (Resp. App. 80). On October 26, 1993, the Department issued initial decisions denying these variance applications. (Pet. App. 158-161). The Nelsons' administrative appeal is pending.

grounds for this challenge, the Nelsons claimed that the application of the Wetlands Regulations to their properties amounted to a taking. The Nelsons also mounted a facial challenge on substantive due process and equal protection grounds to the provisions of the regulations which restrict the construction of coastal engineering structures on coastal dunes and coastal banks.[8] *See* 310 C.M.R. 10.28 and 10.30.

Because the Nelsons' administrative appeal was pending, the Superior Court dismissed the takings claim as premature. (Pet. App. 20-24). The Superior Court also issued a judgment upholding the Wetlands Regulations. (Pet. App. 9 -19)

On appeal, the Massachusetts Appeals Court affirmed, noting that the use to which the Nelsons "put their properties has not at all been affected by the denial of their requests. Both homes remain intact and it is far from a foregone conclusion that the Department will ultimately prohibit protective measures or that the homes will be claimed by the sea." (Pet. App. 2). The Massachusetts Supreme Judicial Court subsequently denied the Nelsons' request for further appellate review. (Pet. App. 8).

Two years after the commencement of this action, in 1992, the Nelsons began to experience some coastal flooding. Accordingly, they applied for and obtained an emergency certification permitting the installation of a temporary sandbag

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[8] Throughout this action, the Nelsons attempted to bypass the administrative process by seeking preliminary injunctions restraining the Department from enforcing the Wetlands Protection Act, M.G.L. c. 140, § 40, and the Wetland Regulations 310 C.M.R. 10.20. (Resp. App. 4-9).

revetment.[9] *See* 310 C.M.R. 10.06. (Resp. App. 44). Because the Nelsons had not begun to evaluate the environmental impacts of their seawalls, the Department conditioned this emergency certification on the requirement that they participate in the MEPA environmental review process. (Resp. App. 44-45). It was only after this emergency certification that the Nelsons began to conduct the necessary environmental review. The Department subsequently established a schedule for the conduct of the adjudicatory hearing in conjunction with the completion of the MEPA environmental review process. (Resp. App. 43).

In June 1994, the Nelsons completed the environmental review process. (Pet. App. 80-82). The environmental impact report (the "EIR") produced in the course of this review noted that the Nelsons' properties had benefitted from the accretion of large amounts of sand and were not in immediate danger. At the same time, the EIR predicted that in approximately two to ten years, the Nelsons properties would again become vulnerable to coastal erosion. (Resp. App. 66). To alleviate the affects of this erosion, the EIR recommended the construction of a continuous wall that would extend from the properties owned by Mr. and Mrs. Nelson to the property owned by Mr. and Mrs. Hicks. (Resp. App. 76).

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[9] On May 7, 1992 Mr. and Mrs. Nelson applied for an emergency authorization to install a temporary sandbag revetment, and on May 11, 1992, the Department issued that authorization. (Resp. App. 44). This sandbag has fully protected the properties owned by Mr. and Mrs Nelson. (Pet. App. 5). To date, Mr. and Mrs. Hicks have not applied for an emergency certification. (Pet. App. 5).

In accordance with the Department's schedule, the administrative process has proceeded in conjunction with the environmental review process. On March 25, 1994, the Department issued a decision bifurcating the hearing into a permitting phase and a variance phase.[10] (Pet. App. 162-163). The first phase of this hearing took place May 1994. (Resp. App. 18). At that hearing, representatives of the Department supported the wall recommended in the EIR. (Resp. App. 76). A decision on the Nelsons' permit application is pending. In accordance with its bifurcation order, the Department intends to hold the second phase in the near future. (Pet. App. 162-163).

Summary of the Argument

The Massachusetts courts correctly dismissed the Nelsons' regulatory taking claim as premature. Without a final decision on their request for permission to build seawalls, the Nelsons are left to argue that the Commonwealth took their properties, merely by requiring them to obtain a permit. It is well settled that such a permit requirement is not a taking. *United States v. Riverside Bayview Homes*, 474 U.S. 121, 127 (1985).

Moreover, it is entirely possible that the Nelsons will be allowed to protect their properties, once the administrative process is complete. Through this process, the Nelsons applied for and obtained permission to build a temporary sandbag revetment, which has in the interim completely protected their properties. Indeed, at the adjudicatory hearing, the Department supported the construction of a continuous seawall that would

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[10] If the Nelsons obtain permits at the end of the first phase, the variance phase may not be necessary.

extend from the properties owned by Mr. and Mrs. Nelson to the property owned by Mr. and Mrs. Hicks. Accordingly, the Nelsons have not shown and cannot show that they should be excused from the final decision requirement on the ground that it would be futile for them to complete the administrative process.

Further there is no merit in the Nelsons' claim that the Commonwealth has taken their properties by unreasonably delaying the administrative process. To the contrary, the Department has attempted to expedite this process, although the Nelsons have failed to pursue their administrative remedies diligently and have devoted considerable effort to avoiding these remedies. To expedite the administrative process, the Department has developed and adhered to a schedule for the adjudicatory hearing in conjunction with the environmental review process for the proposed seawalls, a schedule that provides for the Department to issue a final decision on the Nelsons' permit application by October 15, 1994. In light of this schedule, the Nelsons should certainly not be allowed to establish a taking, merely because of the length of the permitting process.

To avoid the final decision requirement, the Nelsons make an argument which they failed to raise in the state court proceedings. More specifically, the Nelsons claim that they suffered a "physical invasion" of their properties, because there was some flooding before they built their temporary sandbag revetment. Courts have long recognized the highly dynamic and fluctuating nature of the coastline. Given the inherent vulnerability of beachfront real estate, the Commonwealth cannot be held liable for a taking just because flooding occurs at some point in the administrative process.

Finally, the Nelsons claim that the Massachusetts courts applied the wrong standard to their taking claim. This claim is wholly without merit, since the Massachusetts courts did not act on their taking claim, but merely dismissed that claim as premature.

Argument

Review on a Writ of Certiorari is discretionary. Such review will be granted only where there are special and important reasons. In the exercise of this discretion, the Court reviews state court opinions interpreting federal law only when there is an important legal question that has not been decided by the Court or when the state court decision conflicts with Supreme Court or circuit court precedent. For the reasons stated below, the petition clearly does not meet these criteria. Accordingly, the petition should be denied.

I. CONSISTENTLY WITH LONG-STANDING PRECEDENT, THE MASSACHUSETTS COURTS CORRECTLY HELD THAT THE NELSONS COULD NOT MAINTAIN THEIR TAKING CLAIM UNTIL THEY OBTAINED A FINAL DECISION ON THEIR PERMIT AND VARIANCE APPLICATIONS.

The Nelsons are attempting to litigate their taking claim before the Department issues a final decision on their permit and variance applications. In this posture, the Nelsons are left to argue that the Commonwealth has "taken" their properties simply by requiring them to obtain a permit. The Massachusetts courts correctly rejected this argument.

It is well established that the state does not take private property merely by requiring the owner to obtain a permit before he devotes his property to a particular use. "After all, the very existence of a permit system implies that permission may be granted leaving the owner free to use his property." *United States v. Riverside Bayview Homes*, 474 U.S. 121, 127 (1985). Indeed, it is only when a regulatory agency issues a final determination denying a permit that a landowner may attempt to bring a regulatory taking claim based on the imposition of a permit requirement. *Id.*

In *MacDonald, Sommer & Frates v. Yolo County*, 477 U.S. 340, 348, *reh. den.*, 478 U.S. 1035 (1986), the Court explained why a final decision is an essential element of a regulatory taking claim based on the application of a permit requirement:

> It follows from the nature of a regulatory takings claim that an essential prerequisite to its assertion is a final and authoritative determination. A court cannot determine whether a regulation goes too far, unless it knows how far the regulation goes.

See also Williamson County Regional Planning Comm'n v. Hamilton Bank of Johnson City, 473 U.S. 172, 199-200 (1985); *Hodel v. Virginia Surface Mining and Reclamation Ass'n*, 452 U.S. 264, 293-297 (1981).[11] Consistent with this

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[11] *Lucas v. South Carolina Coastal Council*, 112 S.Ct. 2886 (1992) did not eliminate the need to obtain a final decision before bringing a regulatory taking claim. *See Southview Associates Ltd. v. Bongartz*, 980 F.2d 84, 98 (2d Cir. 1992), *cert. denied* 113 S.Ct. 1586 (1993). The Court's recent decision in

precedent, the Massachusetts courts correctly held that the Nelsons could not maintain their taking claims until the Department issues final orders on both their permit and variance applications.

II. CONSISTENTLY WITH WELL-ESTABLISHED PRECEDENT, THE MASSACHUSETTS COURTS CORRECTLY CONCLUDED THAT IT WAS NOT FUTILE FOR THE NELSONS TO PURSUE THEIR ADMINISTRATIVE REMEDIES.

The Nelsons suggest that it would be futile for them to pursue the administrative process through to a final decision. This suggestion is without merit.

Courts have recognized that there is a narrow "futility exception" to the final decision requirement for takings claims. *See e.g. Traweek v. City & County of San Francisco*, 920 F.2d 589, 594 (9th Cir. 1990); *Sequin v. City of Sterling Heights*, 968 F.2d 584, 588 (6th Cir. 1992); *Southview Associates Ltd. v. Bongartz*, 980 F.2d 84, 96 (2d Cir. 1992), *cert. denied*, 113 S. Ct. 1586 (1993). To fall within this exception, a landowner cannot rely on the mere possibility or even the probability that the Department may deny their permit and variance applications. "A sort of inevitability is required; the prospect of refusal must be certain (or nearly so)." *Gilbert v. City of Cambridge*, 932 F.2d 51, 61 (1st Cir. 1991), *cert. denied*, 112 S.Ct. 192 (1991).

Dolan v. City of Tigard, ___ U.S. ___, 1994 Westlaw 876693 (1994) further underscores the need for a final decision.

Moreover, because it may be difficult to determine whether a particular landowner falls within this narrow exception, courts have held that a property owner cannot allege futility until he or she has made at least one meaningful application for administrative relief. To be meaningful, the application must be essentially complete, and should include a request for both a permit and a variance. In addition, the property owner must follow at least one complete application for a permit and a variance through to conclusion. *Id. See Kinzli v. City of Santa Cruz*, 818 F.2d 1449, 1455 (9th Cir. 1987), *cert. denied*, 484 U.S. 1043 (1988).[12]

In this case, the Department has already allowed the Nelsons to protect their properties by granting permission to build temporary sandbag revetments. Moreover, the Department testified at the adjudicatory hearing in favor of the approach identified in the EIR, the construction of a continuous seawall that would protect the portion of the Chatham coastline extending from the properties owned by Mr. and Mrs. Nelson to the parcel owned by Mr. and Mrs. Hicks. (Resp. App. 44). Accordingly, the Nelsons have not shown and cannot show that

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[12] The circuit court cases cited in the text follow Supreme Court precedent. *See, e.g., Williamson Planning Comm'n v. Hamilton Bank of Johnson City*, 473 U.S. 172 (1985); *MacDonald, Sommer & Frates v. Yolo County*, 477 U.S. 340, 353, n. 9, (1986), *reh. den.*, 478 U.S. 1035 (1986). In *Williamson*, the Court held that a taking claim was not ripe because the developer failed to follow the procedures for obtaining a variance. 473 U.S. at 190. In *Yolo County*, the Court held a taking claim unripe, because only one development plan had been rejected. The Court noted that it was possible that some development would be permitted. 477 U.S. 352, 353, n. 9 (1986).

it is "virtually inevitable" that the Department will issue final orders denying them permission to protect their properties.[13]

Nor can the Nelsons show that it is impossible for them to complete the administrative process and obtain final orders from the Department. To the contrary, the adjudicatory hearing has proceeded substantially as scheduled. On May 25, 1994, the Department concluded the permitting phase of the adjudicatory hearing. The schedule calls for the Department to issue its final permit decision no later than October 15, 1994.[14] The Department has also indicated that it will hold the variance phase in the near future. At this point in the proceedings, it is clear that the Massachusetts courts were

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[13] Under the Wetlands Regulations, the Department may allow the Nelsons to build seawalls, if it determines that

> (1) the property is a coastal dune that is not significant to any of the interests identified in the Wetlands Protection Act including storm damage prevention and flood control, 310 C.M.R. 10.28; or
>
> (2) although the property is on a significant coastal dune the proposed structure does not have any of the adverse effects identified in the regulations. 310 C.M.R. 10.28(3).

The Department may also allow the Nelsons to build seawalls by granting them a variance from the regulations. *See* 310 C.M.R. 10.36. *See also Wilson v. Commonwealth*, 413 Mass. 352, 357 n.5, 597 N.E.2d 43 (1992).

[14] The Department established a deadline of August 16, 1994 for post-hearing submissions. The schedule calls for the Department to issue its final permit decision within sixty days of the date that the adjudicatory hearing record is closed. (Resp. App. 43).

correct when they concluded that it would not be futile for the Nelsons to pursue the administrative process to a conclusion. Consistent with well-established precedent, the courts properly required the Nelsons to obtain final decisions from the Department before they could litigate their taking claim.

III. SINCE THE ADMINISTRATIVE PROCESS HAS NOT BEEN SHOWN TO BE FUTILE, THE NELSONS CANNOT AVOID THE FINAL DECISION REQUIREMENT.

The Nelsons make two additional arguments to avoid the final decision requirement. The Nelsons claim that the Commonwealth has taken their properties by unreasonably delaying the permitting process. (Pet. App. 9-10). The Nelsons also attempt to recast their regulatory taking claim as a case of physical invasion. (Pet. App. 16). As shown below, neither of these arguments has merit.

A. *The Nelsons Cannot Establish A Taking Solely Because It Takes Time To Complete The Permitting Process.*

This Court has repeatedly stated that absent "extraordinary delay," any fluctuations in value that occur during the process of governmental decision making are "incidents of ownership" rather than a "taking". *Agins v. Tiburon*, 447 U.S. 255, 263, n.9 (1980); *First Evangelical Lutheran Church of Glendale v. County of Los Angeles*, 482 U.S. 304, 320 (1987). *See Williamson County Regional Planning Comm'n v. Hamilton Bank*, 473 U.S. 172 (1985). Recognizing the complexity of

many permitting decisions, courts rarely hold regulatory agencies responsible for creating such an "extraordinary delay" that it results in a taking. *See 1902 Atlantic Ltd v. United States*, 26 Cl. Ct. 575, 582 (1992)(more than four and a half years to obtain a wetlands permit not extraordinary delay); *Dufau v. United States*, 22 Cl. Ct. 156, 163 (1990)(sixteen months to obtain a wetlands permit not extraordinary delay).[15]

In this case, there is certainly no "extraordinary delay." To the contrary, the Department has tried to expedite the administrative process by developing and adhering to a schedule for the adjudicatory hearing. Pending completion of this process, the Department has allowed the Nelsons to protect their properties with sandbag revetments. Moreover, the Nelsons have continued to enjoy the full use of their properties. In light of these facts, the Commonwealth should not be held liable for a taking, merely because of the length of the permitting process.

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[15] In *Wilson v. Commonwealth*, 413 Mass. 352, 597 N.E.2d 43 (1992), the plaintiffs claimed that the Commonwealth had taken their properties by delaying the wetlands permitting process. The Massachusetts Supreme Judicial Court remanded the case to the Superior Court to assess the validity of that claim, solely because their properties were totally destroyed before the administrative process was complete. But for this destruction, the court would have required the *Wilson* plaintiffs to complete the administrative process and obtain a final decision before bringing a taking claim. *Id.* at 355-358.

B. *The Nelsons Cannot Rely On Coastal Flooding To Establish A Taking By Physical Invasion.*

In a further effort to avoid the final decision requirement, the Nelsons claim that they suffered a "physical invasion," because there was some limited coastal flooding of their properties,[16] before they constructed the temporary sandbag revetment. This Court should not consider this claim, because the Nelsons did not make the "physical invasion" argument in any of the state court proceedings. *See California v. Taylor*, 353 U.S. 553, 556-557, n.2 (1957); *Lawn v. United States*, 355 U.S. 339, 362-363, n. 16 (1968).

However, if it were to consider the physical invasion claim, this Court should conclude that it is entirely without merit. In alleging this "physical invasion," the Nelsons rely on *Pumpelly v. Green Bay Co.*, 80 U.S. (13 Wall.) 166 (1871), and *United States v. Lynah*, 188 U.S. 445 (1903). That reliance is misplaced.

In *Pumpelly* and *Lynah*, the Court held the United States liable for the damages that resulted when the federal government built dams which caused the flooding of private property.

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[16] Because of changes in the breach and the temporary sandbag revetment, the Nelsons' properties are not currently experiencing flooding. Instead, large amounts of sand have been deposited on their properties, providing natural protection against flooding. The EIR predicted that the Nelsons would not be likely to experience flooding for two to ten years. (Resp. App. 66). In these circumstances, the Nelsons' attempt to craft a "physical invasion" taking claim out of the threat of future flooding is premature.

The instant case is entirely different. By requiring the Nelsons to obtain a permit before they build a seawall, the Commonwealth is simply trying to prevent the construction of any structures that would cause abutting properties to flood. The Commonwealth should certainly not be held responsible for a taking, simply because it is attempting to prevent the very harm that the federal government was held liable for in *Pumpelly* and *Lynah*.

Moreover, courts have long recognized that because of its unique and highly fragile nature, land abutting the coast requires more regulation than inland property. *See, e.g., Commonwealth v. Tewksbury*, 52 Mass. (11 Metc. 55) (1846); *Commonwealth v. Alger*, 61 Mass. 53 (1851). Because the coastline is undergoing constant change as a result of natural forces, courts have held that the owner of littoral land necessarily takes his property with the knowledge that the boundary may change by accretion or reliction. *See, e.g., Michaelson v. Silver Beach Improvement Association, Inc.*, 342 Mass 251, 173 N.E.2d 273 (1961).

Given the highly dynamic nature of the shore, the Commonwealth clearly cannot be held responsible for a taking, just because a coastal property experiences flooding at some point in the administrative process. The taking clause was not intended to make a state the insurer of coastal property, whenever the owner applies for a permit to construct a seawall.

IV. THE MASSACHUSETTS COURTS PROPERLY HANDLED THE NELSONS' FACIAL CHALLENGE TO THE REGULATIONS.

The Nelsons argue that the Massachusetts courts applied the wrong standard to their taking claim. This position is wholly without merit, since the Massachusetts courts dismissed the taking claim as premature and did not address it on the merits. The Massachusetts courts did, however, address the merits of the facial challenge to the Wetlands Regulations on substantive due process and equal protection grounds and correctly upheld the regulations after applying the rational basis test to that claim. *See Pennel v. San Jose*, 485 U.S. 1, 14 (1988); *Nectow v. Cambridge*, 277 U.S. 183, 187-188 (1928); *Gilbert v. City of Cambridge*, 932 F. 2d 51, 65-66 (1st Cir. 1991), *cert. denied*, 113 S.Ct. 1586 (1993); *Southern Pacific v. City of Los Angeles*, 922 F. 2d 498, 507-508 (9th Cir. 1990), *cert. denied*, 112 S.Ct. 382 (1991).[17]

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[17] The Massachusetts court correctly treated the Nelsons' equal protection and substantive due process claim as a facial challenge. In the absence of a final adjudicatory decision, the Nelsons could not maintain an as-applied challenge on substantive due process and equal protection grounds. *See Williamson County Regional Planning Comm'n v. Hamilton Bank of Johnson City*, 473 U.S. 172, 199-200 (1985); *Pennel v. San Jose*, 485 U.S. 1, 11 n.5 (1988). *See also Gilbert v. City of Cambridge*, 932 F.2d 51, 57 (1st Cir. 1991), *cert. denied* 113 S.Ct. 1586 (1993). Unlike an as-applied challenge, a facial challenge to the regulations does not require a final permit decision. *See Smithfield Concerned Citizens v. Town of Smithfield*, 907 F.2d 239, 241-243 (1st Cir. 1990).

Conclusion

For the reasons set out above, the Court should deny the petition for a Writ of Certiorari.

Respectfully submitted,

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Appendix

Table of Contents

	Page
Decision on Plaintiff's Motion for Preliminary Orders dated 1/3/90, (Dolan, J.) Barnstable Superior Court C.A. No. 90-1712	App. 1
Decision on Plaintiffs' Petition Pursuant to G.L. c. 231, Sec. 118 dated January 14, 1991, Smith, J., Appeals Court 91J28	App. 4
Judgment dated February 13, 1991, (Abrams, J.) Supreme Judicial Court for Suffolk County No. 91-31	App. 6
Memorandum and Order dated January 17, 1992 Kass, J., Appeals Court 91-J-933	App. 7
Commonwealth's Opposition to Petition for Single Justice Review Pursuant to G.L. c. 231, § 118 and Request for Hearing	App. 10
Department of Environmental Protection's Post Hearing Brief, August 16, 1994	App. 16
Department of Environmental's Decision on Request for Variance October 23, 1993	App. 31

Emergency Certification dated May 11, 1992 App. 46

Superseding Order of Conditions Massachusetts Wetlands Protection Act G.L. c. 131, §40 DENIAL DEP File No. SE 10-804 Applicant Alfred Nelson App. 52

Superseding Order of Conditions Massachusetts Wetlands Protection Act G.L. c. 131, §40 DENIAL DEP File No. SE 10-855 Applicant Lewis Hicks, III App. 55

Pre-Filed Testimony of James Mahala dated 5/12/94 App. 58

Affidavit of Mary F. Connolly dated November 1, 1993 App. 79

1/3/90
Denied
Dolan, J.

COMMONWEALTH OF MASSACHUSETTS
BARNSTABLE, SS SUPERIOR COURT
C.A. NO. 90-1712

ALFRED NELSON, EVELYN NELSON
LEWIS HICKS, III, AND BERNICE HICKS,
Plaintiffs

V.

COMMONWEALTH OF MASSACHUSETTS
Defendant

PLAINTIFFS' MOTION FOR PRELIMINARY ORDERS

Now come the plaintiffs in the above-captioned matter and move pursuant to this Honorable Court's genral superintendency powers and statutes including but not limited to Mass.R.Civ.P. 65(b), G.L. c. 231A sec. 2, and Superior Court Rule 9A that the following be entered as orders:

PRAYER I: Plaintiffs are allowed to construct the following on properties at Chatham Harbor, Chatham, Barnstable County, Massachusetts:

a) Stone seawalls per specifications of defendant for the Chatham Harbor area, with height twenty feet above beach elevation and depth twelve feet below said elevation;

b) Rock windrows with height twelve feet above beach elevation; or

c) Steel bulkheads with height twenty feet above beach elevation and depth twelve feet below said elevation.

PRAYER II: Stone seawalls requested in Prayer I shall remain in place until issues raised in plaintiffs' Complaint are ettled or fully adjudicated. Plaintiffs will post a bond of $20,000.00 with this Court to cover the cost of removal of said seawalls. Said bond shall remain posted until issues raised in plaintiffs' Complaint are settled or fully adjudicated. Count IV of the Complaint in this matter (taking without compensation) is dismissed without prejudice.

As grounds, plaintiffs say that without the relief requested they will suffer the immediate and irreparable loss of their homes.

Further grounds for this Motion are presented in the Complaint filed in this matter, Plaintiffs' Memorandum in Support of Motion for Prelinimary Orders, the Affidavit of Nicholas B. Soutter, Esq. and the Affidavit of Robert E. Weaver.

Request for Hearing of Emergency Motion

Plaintiffs request hearing pursuant to Superior Court Rules 9A(c)(3) and 9A(c)(e)(1).

RESPECTFULLY SUBMITTED,
ALFRED NELSON, EVELYN NELSON, LEWIS HICK, III, AND BERNICE HICKS
By their attorneys,

Nicholas B. Soutter
BBO #473740
Paul S. McGovern
BBO #549167
One Washington Street
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Wellesley, MA 02181
(617) 237-6300

COMMONWEALTH OF MASSACHUSETTS
APPEALS COURT
No. 91J28

ALFRED NELSON, EVELYN NELSON
LEWIS HICKS, III, AND BERNICE HICKS,
Plaintiffs

V.

COMMONWEALTH OF MASSACHUSETTS
THE TOWN OF CHATHAM
Defendants

PLAINTIFFS' PETITION PURSUANT TO G.L. c. 231, SEC. 118

1. *Request for Interlocutory Review*

Plaintiffs request seawalls pending determination of the constitutionality of state requlations. (Request denied by Order of January 3, 191, Nelson, et al. v. Commonwealth, Barnstable Superior Court, C.A. No. 90-1712).

2. *Statement of Issues Presented*

Plaintiffs' properties will be destroyed without seawalls (see Trial Court findings, Attachment A).

State regulations prohibiting seawalls (310 CMR relation to legislative purpose (Wetlands Protection Act, G.L. c. 130, sec. 40).

3. *Relief Requested*

See prayers of Plaintiffs' Motion for Preliminary Orders requesting seawalls (Attachament B).

4. *Copy of Trial Court Findings and Order*

See Attachments A and B for Trial Coury findings and Order in this matter.

For further grounds see Plaintiffs' Brief in Support of Petition Pursuant to G.L. c. 231, sec. 118.

Appeals Court
SUBMITTED,
The within requested relief is denied.
Smith, J.

January 14, 1991
Attest: Nancy Turck Foley
Clerk

RESPECTFULLY

ALFRED NELSON, EVELYN NELSON, LEWIS HICK, III, AND BERNICE HICKS
By their attorneys,

Nicholas B. Soutter
BBO #473740
Paul S. McGovern
BBO #549167

COMMONWEALTH OF MASSACHUSETTS

SUFFOLK, SS. SUPREME JUDICIAL COURT
FOR SUFFOLK COUNTY
NO. 91-31

ALFRED NELSON,[1] et al.

v.

COMMONWEALTH OF MASSACHUSETTS[2]

JUDGMENT

After hearing, the request for relief pursuant to G. L. c. 211, § 3 is denied.

By the Court (Abrams, J.)
/s/
Assistant Clerk of Court

ENTERED: February 13, 1991

1/ Evelyn Nelson, Lewis Hick and Bernice Hicks
2/ Commonwealth of Massachusetts and the Town of Chatham

COMMONWEALTH OF MASSACHUSETTS
APPEALS COURT

91-J-933

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III & BERNICE HICKS

vs.

COMMONWEALTH OF MASSACHUSETTS
and the
TOWN OF CHATHAM.

MEMORANDUM AND ORDER

Although not immune to review, the regulations of administrative agencies and the decisions of those agencies applying their regulation, carry great weight. In this case the Department of Environmental Protection has developed regulations concerning coastal dunes. They are based on assumptions founded in hydrodynamics and geology. The Superior Court judge who refused to enjoin application of the regulations and, in consequence, refused to authorize the building of stone revetments by the petitioners, correctly prognosticated slim chance of success on the merits.

The adverse consequences to the petitioners, that the sea may wash their houses away, are sufficiently grave, that I invited the governments to furnish me with material touching on what harm might accrue to the general public interest should a sea wall be erected and left in place pending adjudication of

the merits. That is, might steps taken so that adjudication of the merits does not become academic?

I have been furnished with affidavits from government engineers which say that the construction of revetments by the Nelsons and the hicks would tend to erode the beaches on either end of those revetments. I read the government affidavits as predicting that protection of the Nelson and Hicks properties will simply place at risk other properties. Natural dune movement, the government affidavits say, is the best hope for coastal preservation. Indeed, the government affidavits say, the revetments are not even likely to save the Nelson and Hicks houses. Of course, the petitioners do not agree with this scientific view and put forward scientific opinions of their own. In this situation of conflict, and taking into account the considerable unlikelihood that the plaintiffs would be able to establish that the underlying regulation is unlawful, let alone unconstitutional, I think the Superior Court judge correctly declined to make an order which would permit the petitioners to construct seawalls to protect their oceanfront houses. On the question of whether injunctive relief ought to be granted, government steps to protect the general public interest receive deference. See *Commonwealth* v. *Mass CRINC*, 392 Mass. 79, 88-89 (1984).

I deny the petition for relief under G.L. c. 231, § 118, first par.

I add as a postscript that the interests of the plaintiffs in this action may be better served by reaching a commonly acceptable

solution (the government, for example, has recommended dune nourishment), rather than engaging in protracted combat with local and State authorities,

By the court (Kass, J.),

Ashley Ahearn
Assistant Clerk

Entered: January 17, 1992.

November 1, 1993

BY HAND

Clerk of Court
Appeals Court
New Court House, 15th Floor
Pemberton Square
Boston, MA 02108

RE: *Nelson, et al. v. Commonwealth et al., No. 92-P-827*

Dear Clerk of Court:

I have enclosed the following for filing in the above-referenced case:

1. the Commonwealth's Opposition to Plaintiffs' Petition for single-Justice Review Pursuant to G.L. c. 231, § 118 and Request for Hearing;
2. exhibits 1-5 to the Commonwealth's Opposition; and
3. certificate of service.

Thank you for your assistance with this matter.

Very truly yours,

Mary B. Griffin
Assistant Attorney General
Environmental Protection Division
(617) 727-2200 ext. 2553

COMMONWEALTH OF MASSACHUSETTS
APPEALS COURT
NO. 92-P-827

ALFRED NELSON, ET AL.,
Plaintiffs - Appellants,

v.

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
Defendants - Appellees

COMMONWEALTH'S OPPOSITION TO PETITION FOR SINGLE JUSTICE REVIEW PURSUANT TO G.L. c. 231, § 118

The Commonwealth of Massachusetts (the "Commonwealth") opposes the Plaintiffs' Petition for Single Justice Review Pursuant to G.L. c. 231, § 118 and Request for a Hearing (the "Petition"). The Petition is moot because the Department of Environmental Protection ("DEP") has already issued its decisions on the Plaintiffs' request for variances.

The Court should deny the Petition for Single Justice review because it is moot. The Plaintiffs argue that the Court should allow the Petition because DEP has not responded to their request for variances. On October 26, 1993, however, DEP issued its Decisions on Request for Variances with respect to both the Nelson and the Hicks properties. *See* Decisions on Request for Variances, attached as *Exhibit 1*.

The Court should not grant Single Justice review when DEP has already issued its decisions.[1] *See Int'l Marathons, Inc. v. Attorney General, et al.*, 392 Mass. 376, 380 (a984) (mootness doctrine applies to judicial review of administrative decisions as well as appellate review of lower court decisions); *Degrace, et al. v. Conservation Commission of Harwich*, 31 Mass. App. Ct. 132, 136 (1991) (dismissal of appeal of Conservation Commission's wetlands permit decision on mootness grounds).

In addition, the Court should not grant Single Justice review when DEP promptly responded to Plaintiffs' request for variances. Contrary to the assertions in the Petition, the Court did not order the Commonwealth "to decide within thirty days whether the plaintiffs can build seawalls." Petition, p. 1. Instead, the Court urged the Commonwealth to respond promptly if the Plaintiffs requested a variance. At oral argument, counsel for the Commonwealth estimated that the Commonwealth could respond in about thirty days. Affidavit of Mary Connolly, attached as *Exhibit 2*. After the oral argument, the Plaintiffs filed the request for variances on or about September 20, 1993. Shortly thereafter, on October 26,

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[1] Even if the Court were to allow the Petition for review, it would be improper for the Single Justice to grant the relief that the Plaintiffs request. In the Petition, the Plaintiffs "request that this Court issue an order granting plaintiffs permission to construct seawalls as shown in the engineering plan" submitted to DEP. The Court, like DEP, should not issue an order allowing the construction of engineering structures on Plaintiffs' properties without access to the information in the Environmental Impact required under the Massachusetts Environmental Policy Act, G.L. 30, §§ 61-62H.

1993, DEP issued its Decisions on Request for Variances. Decisions on Request for Variances, *Exhibit 1*.

Further, DEP issued its decisions in accordance with the Wetlands Protection Regulations.[2] DEP carefully evaluated the Plaintiffs' request, and wrote detailed decisions in response to the request. DEP denied the request on the grounds that the Plaintiffs failed to make the showing required under 310 C.M.R. 10.36. In its variance decisions, DEP informed the Plaintiffs of their right to an administrative appeal. In addition, DEP set out an expedited schedule for an adjudicatory hearing on Plaintiffs' appeal of the denial of Superseding Orders of Conditions. *See* Decisions on Request for Variances, *Exhibit 1*. After receiving DEP's decision, the Plaintiffs filed an Appeal of Wetland Variance Denial with DEP.[3]

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[2] The Wetlands Protection Regulations do not require DEP to issue a decision on a request for a variance within a certain number of days. Instead, 310 C.M.R. 10.36 provides that "[a]fter reviewing the information submitted with the request for a variance and any other information submitted by any party within twenty-one (21) days of the request, the Commissioner shall issue a decision as to whether to grant the request." The regulation, therefore, requires other parties to submit information to the Commissioner within twenty-one days of the request for a variance. The regulation further implies that the Commissioner must wait twenty-one days to receive this additional information before issuing a decision, but does not establish a deadline for the decision.

[3] Appeal of Wetland Variance Denial, attached as *Exhibit 3*. The Wetlands Protection Regulations at 310 C.M.R. 10.36 allow certain persons, within ten days of issuance of the Commissioner of DEP's decision on a variance request, to request an adjudicatory hearing. According to DEP's Decisions on Request

In addition, the Plaintiffs' seek Single Justice review pursuant G.L. c. 231, § 118 although they are not aggrieved by an interlocutory order specified in that statute. G.L. c. 231, § 118 establishes a procedure for a "party aggrieved by an interlocutory order of a *trial court* in the superior court department, the housing court department, the land court department or the probate and family court department: to request relief from that order (emphasis added).[4] In this case, the Plaintiffs do not even allege in the Petition that they are aggrieved by an interlocutory order of a trial court. Furthermore, this Court never issued an order at the September 20, 1993 hearing.[5] The Court, therefore, should not grant the Petition for G.L. c. 231, § 118 review.

Finally, the Court should not grant single Justice review when DEP is actively working to resolve this matter as quickly

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for Variances, the administrative law judge may hold the variance appeal in conjunction with the schedule for the adjudicatory hearing on the Plaintiffs' appeal of denial of Superseding Orders of Conditions. *See* Decisions on Request for Variances, *Exhibit 1*.

[4] G.L. c. 231, § 118 only creates a narrow exception to the general policy that interlocutory rulings should not be presented piecemeal to the Appeals Court for review. *Packaging Industries Group, Inc., et al. v. Cheney*, 380 Mass. 609, 612 (1980); *CUNA Mutual Insurance Society v. Attorney General*, 380 Mass. 539, 541 (1980) (general policy disfavoring appeals from interlocutory orders).

[5] *See* Affidavit of Mary Connolly, *Exhibit 2*; *see also* copy of Appeals Court Docket, Case 92-P-000827, attached as *Exhibit 4* (Appeals Court docket does not indicate that the Court issued any order at or subsequent to the oral argument).

as possible in accordance with established administrative procedures. DEP set forth an expedited schedule for the adjudicatory hearing in its Decision on Request for Variances. In addition, DEP has taken a number of actions to facilitate prompt resolution of this matter, including 1) site visits to assess and monitor current conditions, 2) emergency certification of a temporary structure on the Nelson property 3) meeting with the consultants preparing the draft Environmental Impact Report to expedite its completion. *See* Affidavit of James Mahala, attached as *Exhibit 5*.

Respectfully submitted,

SCOTT HARSHBARGER
ATTORNEY GENERAL

Madelyn Morris, BBO #355870
Mary Griffin, BBO #555986
Assistant Attorneys General
Environmental Protection Division
One Ashburton Place, 19th Floor
Boston, Massachusetts 02108

DATE: November 1, 1993

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of	)	Docket No. 92-140
	)	File No. SE 10-987
ALFRED B. NELSON	)	Docket No. 93-090
	)	(Variance Denial)
	)	CHATHAM
In the Matter of	)	Docket No. 92-152
	)	File No. SE 10-1027
LEWIS W. HICKS	)	Docket No. 93-089
	)	(Variance Denial)
	)	CHATHAM

DEPARTMENT OF ENVIRONMENTAL PROTECTION'S POST HEARING BRIEF

I. FACTUAL AND PROCEDURAL HISTORY

Chatham, occupying Cape Cod's extreme southeastern corner, lies at the end of two littoral drift systems: one directed easterly along the Cape's south coast and one directed southerly along the southern portion of the east coast. (JM Ex. 13, fig. 1). On January 2, 1987, during a northeasterly storm, Nauset Beach was breached at a point almost directly east of the lighthouse at Chatham resulting in increases in wave energy and tidal range which produced increased coastal erosion. (JM, Pars. 20-22).

The breach has widened in ensuing years, and has become known as New In et.
The section of Nauset Beach located to the north of New Inlet iscalled North Beach, and the section located to the south of New Inlet is called South Beach.

The Little Beach area is that part of the Chatham mainland that is landward of South Beach. (JO Par. 8). Alfred B. Nelson and Lewis B. Hicks, ("the Applicants"), each own shorefront property in the Little Beach area. (JO Par. 8). The Nelson property is located immediately south of Bearse's Way. The Hicks property is located about one thousand feet south of the Nelson property, at the eastern end of Dune Drive.

On December 23, 1991 Nelson filed a Notice of Intent with the Chatham Conservation Commission proposing construction of a two sided rock revetment, 320 feet long, with a maximum elevation of 16 feet above mean sea level. It was proposed to be located along the landward edge of a primary dune. (JM Pars. 9, 35). On January 30, 1992, the Conservation Commission issued an Order of Conditions denying Nelson permission to construct the revetment. (JM Ex. 3).

On May 11, 1992, the Department issued an Emergency Certification permitting Nelson to build a sand bag, (Dura Bag) wall to abate the threat of erosion. (JM Par. 45 (b)). It was built, and consists of approximately fifty bags of sand weighing 4 tons each, a total of 200 tons of sand. (RW p. 5 par. 23).

On October 20, 1992 the Department issued a Superseding Order of Conditions denying Nelson permission to build the revetment. (JM par. 14, Ex. 5). The denial was based upon the revetment's anticipated adverse effects on the coastal beach and primary dune. On October 28, 1992, Nelson appealed.

Lewis Hicks filed a Notice of Intent with the Chatham Conservation Commission on May 15, 1992 also seeking permission to construct a revetment, similar in design to the two sided Nelson proposal, and also proposed to be located on the landward side of a primary coastal dune. (JM pars. 11, 36). On July 2, 1992, the Conservation Commission denied Hicks permission to build. (JM par 11.; Ex. 4). The Department issued a Superseding Order of Conditions on November 9, 1992 again denying the project, and Hicks also appealed. (JM par. 14; Exs. 6, 7, 8).

Aubrey Consulting, Inc., ("ACI") was retained by the Town of Chatham to prepare a coastal management plan for the area affected by the breach. A draft Environmental Impact Report, ("DEIR") for the area from Bearse's Way south to Morris Island, the so-called Phase II area, including Little Beach, was received by the Department on December 7, 1993. (JM Ex. 11; Ex. 23B). It found that the Little Beach area, is protected from all sides by either a barrier beach or shoaled regions that inhibit the propagation of wave energy and ...is dominated by shallow water fetch-limited waves..... (p.27). It also concluded that the area is....protected by South Beach and is actively accreting" (Ex. 23B p.41).

Following the statutorily required public notice and comment period, a Final Environmental Impact Report was issued in May 1994. Substantially the same as the DEIR, it concluded that South Beach would begin to break up within 10 to 20 years, and that Little Beach would then be subject to high rates of erosion. (Ex. 23A p. 9). It recommended temporary groins, beach nourishment and arevetment . (Ex 23A pps. ix-xii).

II. FACTS

The Department submitted testimony by James Mahala, ("Mahala"), an Environmental Analyst with the Department, and by James O'Connell, ("O'Connell"), Senior Coastal Geologist with the Massachusetts Coastal Zone Management Office, ("MCZM").

Mahala holds a Masters degree in Coastal Geology and has been employed as an Environmental Analyst with the Department since 1986. He has conducted over 300 on-site inspections, (JM pars.1-7), and is intimately familiar with the Chatham shoreline, having conducted approximately 25 site visits there since the 1987 breach. (JM par. 8). He made numerous on-site inspections of the Nelson property, as early as February 1, 1988 and as recently as April 26, 1994. (JM pars. 8, 13).

O'Connell holds a Masters degree in Physical Coastal Geography, (JO pars. 1-4), has been employed by the MCZM since 1985, and has held the position of Senior Coastal Geologist since 1989. (JO par. 1). He is familiar with the Little Beach area, having visited there on numerous occasions since January 1987, most recently on October 21, 1993 (JO pars. 6, 7).

Coastal dunes aid in storm damage prevention and flood control by supplying sand to coastal beaches, thereby furthering the dissipation of wave energy. Coastal dunes protect inland coastal areas from storm damage and flooding by storm waves and storm elevated sea levels because such dunes are higher than the coastal beaches which they border. In order to protect thisfunction, coastal dune volume must be maintained while allowing the coastal dune shape to conform to natural wind and water flow patterns. On retreating shorelines, such as the Chatham coast, the ability of coastal dunes bordering the

coastal beach to move landward at the rate of shoreline retreat allows these dunes to maintain their form and volume, which in turn promotes their function of protecting against storm damage or flooding.(JM, 33).

The Nelson revetment is proposed to be built along the landward edge of a primary dune, (JM par. 35, JO par. 14, 18). The Hicks revetment is also proposed along the landward edge of a primary dune, (JM par 36; JO, par. 15). Although landform alterations have occurred on the Hicks property, the locus of the proposed construction is elevated, and performs the functions of flood prevention and storm damage control. (JO pars. 16, 17, 19). Additionally, the United States Geologic Service has identified both the Nelson and Hicks properties as containing beach and dune deposits, so it is likely that any artificial fill on the Hicks property overlays a coastal dune deposit, (JM par. 19).

Revetments have been documented in both laboratory and field studies to cause increased erosion on the fronting beach and adjacent properties by eliminating the source material for beaches and dunes due to retention of sand behind the structures which would otherwise be available in the absence of the structure, (JO par. 20). The phenomenon referred to as "end scour" or "flanking", is defined as the excess erosion which the presence of a structure causes to occur beyond the naturally occurring erosion, and is awell documented process, (JM par. 42; Tr. II-167, lines 9-19).

The revetments proposed across the Nelson and Hicks properties will cause severe end scour on the adjacent properties. This will result in significant erosion of beach and dune areas, and increased storm damage and flooding potential to these properties. These effects will be particularly severe on

the immediately adjacent downdrift properties, (JO par. 22; Tr. II-167 l. 7). In addition, the anticipated end scour of the proposed individual revetments may flank the structures, thereby causing their failure. This is of particular concern for a revetment on a coastal dune due to the unconsolidated, highly porous and dynamic nature of the dune material. (JO par. 25).

The revetments will have adverse effects on the coastal dunes by affecting the ability of waves to remove sand from the dune, by disturbing the vegetative cover, thereby destabilizing the dune, by modifying the dune form, by interfering with the landward and lateral movement of the dune, and by removing sand from the dune artificially. (JO par. 24).

Coastal beaches serve the purpose of storm damage prevention and flood control by dissipating wave energy and by providing sediment to supply other coastal wetland resource areas including coastal dunes, nearshore areas of land under the ocean and other coastal beaches. (JM par. 32).

The Nelson house is fronted by a primary coastal dune. Seaward of the dune is an area of coastal beach approximately 300 feet in width. (JM, Par. 18). The Nelson revetment would change the beachfrom a dissipative one to a reflective one leading to increased beach scour. Incoming waves and waves reflected from the revetment would apply their energies to the beach, accelerating the transport of sediment in front and downdrift of the revetment. (JM Par. 41). This would lead to the narrowing and the lowering of the coastal beach. (JM par. 44 (a)). The revetment would also increase erosion of the downdrift beaches through reflection of wave energy, thereby causing end scour. (JM par. 44(b)).

III. CONCLUSIONS OF LAW

A. The Nelson and Hicks projects are both located within primary coastal dunes and, therefore are *per se* significant to the interests of flood control and storm damage prevention. (310 CMR 10.28 (1)).

B. The Nelson and Hicks projects will have adverse effects on the dunes, by:

1. affecting the ability of waves to remove sand from the dunes, (310 CMR 10.28 (3) (a);
2. disturbing the vegetative cover so as to destabilize the dunes, (310 CMR 10.28 (3)(b);
3. causing modification of the form of the dunes, therebyincreasing the potential for storm and flood damage, (310 CMR 10.28 (3)(c));
4. interfering with the lateral and landward movement of the dunes, (310 CMR 10.28 (3) (d)); and
5. causing removal of sand from the dunes artificially, (310 CMR 10.28 (3) (e)).

C. The Nelson project is located within the buffer zone to a coastal beach, (310 CMR 10.27 (1));

D. The Nelson project will have an adverse effect on that coastal beach:

1. by increasing erosion, (310 CMR 10.27 (3);
2. by changing its form, (310 CMR 10.27 (3); and
3. by decreasing its volume, (310 CMR 10.27 (3).

E. The Nelson project will have an adverse effect on downdrift coastal beaches:

1. by increasing erosion, (310 CMR 10.27 (3);
2. by changing its form, (310 CMR 10.27 (3); and
3. by decreasing its volume, (310 CMR 10.27 (3).

IV. ARGUMENT

A. Location of Project Proposals

The Applicants have not challenged the Department's determination that both revetments are proposed to be built within primary coastal dunes, nor its determination that the Nelson project is within the buffer zone to a coastal beach.

B. Significance

As they pertain to the primary dunes, the Applicants' significance arguments fail because such dunes are per se significant to storm damage prevention and flood control. 310 CMR 10.28 (1).

The Applicants have not made a clear showing that the coastal beach in front of the Nelson dune does not play a role in stormdamage prevention or flood control. (Tr. II-105 l. 21). The Applicants admit that South Beach currently provides them with protection. (OM/WB p. 3 (par (c)). Applicants argue that the volume of sand on their property is insignificant in relation to the volume of sediment trapped by revetments along the mainland to the north of them, but they admit that the primary source of sediment for their properties is the outer barrier beach and not the mainland. (Tr. II-128 l.17; Tr. p. 124 l.14).

C. Effects on Coastal Dunes and Beaches

Applicants argue that the negative effects of revetments are limited or negligible, and any negative effects that may be caused by revetments are immaterial, because all sand is eventually lost to deep water, (OM/WB p. 17 par. d).

On cross examination, Ole Madsen, ("Madsen"), the Applicants' expert on waves, admitted that all sand is not lost to deep water, and that he had in fact filed an affidavit in a court action filed on behalf of the Applicants against the Commonwealth relating to the same properties, in which he stated that two-thirds of the sand eroded from a beach will

return to the beach. (Tr. p. 175 l.20 to p. 177 l.4). Walter Bohlen, ("Bohlen"), the Applicants' expert on sediment transport, also admitted that some of the sand currently in front of the Nelson and Hicks properties will move landward and some of it will move to the southwest. (Tr. II-98 l.3 to II-99 l.4).

On cross examination Madsen admitted that wave energy was reflected off the face of revetments, (Tr. p. 167 l. 3) and that he did not know whether such reflection affected the fronting beach. (Tr. p. 171 l. 12). He also admitted that Robert Dean of the University of Florida, Gary Griggs of the University of California, and James Tait of Oregon State University had done studies documenting that revetments cause end scour. (Tr II-55 l. 20 to II- 56 l. 17). Bohlen also acknowledged that revetments affect the extent of erosion in unrevetted areas. (Tr. II-120, l. 6). By contrast, both Mahala and O'Connell have observed end scour. (Tr. II-200 l. 19; Tr. III-40 l. 7).

The Applicants' witnesses conclude that a single revetment is preferable to isolated revetments, (Trs. p. 163 l.4; II-118 l. 10) The conclusion is inescapable that the Applicants seek to minimize the effects of revetments on neighboring properties because the properties so affected are their neighbors' and not their own.

The Applicants argue that individual revetments are necessary to protect them from an imminent threat of serious flooding and the potential loss of their houses. (RW pars. 21, 30, 31). Applicants' witnesses agreed with the Department however, that the proposed revetments will not alleviate the Applicants' flooding problems. (Trs. p. 117 l. 2; II-34 l. 10, l. 17, l. 22 to 2-36 and l. 24).

The cornerstone of the Applicants' argument regarding the threat of erosion is the testimony of Robert Weaver. Weaver testified that the beach in front of the Applicants' properties will disappear sometime between six and twenty-five months. (RW pars. 45 through 48). Weaver lacks the expertise based upon either his education or experience to make predictions about future ratesof erosion in the Little Beach area. He also failed to make an adequate factual inquiry to support his predictions.

Weaver holds a high school diploma, took three college level mathematics courses, and attended 40 hours of continuing education courses with the Massachusetts Association of Land Surveyors, (Tr. p. 48 l. 16 through p.49 l. 10). His relevant work experience consists of supervision of the construction of revetments from 1974 to 1979, and employment from 1986 through 1991 for Engineering Information Technology, (EIT) where he acquired permits for the construction of revetments and subsurface sewage disposal systems.

Weaver was not involved in preparing the plans for the proposed revetments which are the subjects of the adjudicatory appeal. (Tr. p. 123, l.1). He permanently relocated to North Carolina in 1991, and since leaving Massachusetts, had been to the Applicants properties on three occasions.

In order to make an informed prediction of future rates of erosion, sound geological practice requires the review of historical literature regarding shoreline changes of the outer Cape, as well as a review of aerial photographs, and all pertinent scientific and government reports. (Tr. II-66 l. 1, to 2-69 l. 1). Weaver's testimony fails to indicate whether he took any of these steps. Much of the data he relied upon came from a 1968 Corps of Engineers report, (Tr. 91, l. 17), despite the

fact that the DEIR discussed several reports and studies of the area prepared after the 1987 breach. (Exs., 23A, 23 B).

In support of his predictions, Weaver relies heavily on ratesof erosion which occurred at the subject properties between 1989 and 1991. Weaver admitted that this period included at least two severe storms, Hurricane Bob and the October 1991 Halloween or "no- name" nor'easter, (Tr. p. 68 l. 13), and that the latter storm in particular caused extensive damage and erosion to the Outer Cape. (Tr. p. 69, l. 5). He also admitted that during the period from 1991 to the present, the beach has accreted by approximately 300 feet. (Tr. p. 70 l. 22). Bohlen also admits that the beach has grown. (II-117 l.2; see also JM pars. 23, 24). Weaver nevertheless maintains that the two year period from 1989 to 1991 is a representative period which can form the basis for predicting future rates of erosion. (Tr. p.73 l. 2).

Weaver's testimony is also based upon erroneous factual assumptions, the most glaring of which is his assertion that the Applicants are vulnerable to 18 foot waves, (RW par. 4). Each of the Applicants' witnesses admit, however that it would be impossible for an 18 foot wave to propagate across the swash platform and strike the Applicants' properties. (Tr. p. 191 l. 4 to 195 l. 1; p. 96 ls. 20-24; Tr. II-22, l. 15; II-103, l. 5; Ex. 22). The average shallow-water wave height is approximately 1.6 ft. (Ex. 23B, p. 26, sec. 4.1.2).

The arguments advanced by Madsen and Bohlen rely heavily upon the observations and conclusions of Weaver and should therefore be given little weight. (Tr. Vol II, pps. 26, l. 23; 28 l., 15; 39, l. 5; 108, l. 10; and 117, l. 2). Madsen had last been to the site in August 1992, (Tr. p. 165 l.24), and had not reviewed the EIR (Tr.p. 161 l. 18).

ACI used an historical shoreline analysis to formulate a quantitative predictive model of the future evolution of New Inlet. The DEIR included an extensive literature review. (Ex. 23B, pps. 8- 10). Results of the US Army Corps Wave Information Phase III, (Jensen, 1983), were used to determine offshore wave conditions. A study of waves and sediment transport performed by Gallagher in 1988 at Woods Hole Oceanographic Institute under the advisement of Dr. Aubrey was also considered. The 1992 FEMA study of Chatham was used to determine flood elevations. Wetland areas were studied by reviewing Department of Environmental Management Orthophoto Maps, vertical aerial photos and by site visits. (Ex. 23B).

The situation in Little Beach is unique and complex. (JO par. 11). The Department agrees with the ACI conclusion that the spit or tombolo currently protecting the Nelson and Hicks properties will begin to break up and migrate at some time in the future between two and ten years from now. (Ex 23A; Tr. p. 2-186, l. 12). The threat to the Applicants from erosion will be temporary. (JM 51).

As a result of littoral drift, the focus of coastal erosion will shift south of the Applicants' properties, and as North Beach migrates southward over time, their properties will again be protected by a barrier beach. At that time the Little Beach area will no longer be subject to direct wave attack from the Atlantic Ocean. (JM par. 51). Additionally, if the channel meanders close to the dunes in the Little Beach area, the natural function of the dunes eroding during storms and providing nearshore sand bars, andthen migrating shoreward allowing reformation of the dunes during post-storm conditions would be compromised, i.e. the sand would be swiftly carried

downdrift in the channel currents and the sand would not be available to migrate landward and reform the dunes, as typically occurs. (JO par.12).

The DEIR recommends that a continuous revetment be constructed as far landward as possible, extending from the Nelson property to the Hicks property. Constructing the revetment as far landward as possible will maximize the natural protective attributes of the beach and dune system. A continuous revetment will prevent the end scour and flanking problems associated with separate revetments. Separate revetments would cause severe impacts on adjacent properties, and gaps would compromise the integrity of the structures.

The recommended plan also proposes that a series of temporary groins, filled with sediment to entrapment capacity, be constructed to slow the loss of fronting beach. Filling the groins to entrapment capacity will ensure that they do not interfere with longshore sediment transport. As the shoreline retreats, the groins should either be shortened or artificially filled with sand. Once the area is again protected by a barrier beach, the groins should be removed since they will no longer be needed. An ongoing condition requiring beach restoration should be required, in the event that the beaches are not fully restored by natural processes. (JM pars. 50, 51). The Department recommends that a single entity file a Notice of Intent for the entire project in order to ensurethat the revetment is constructed in a contiguous manner, and that mitigation is implemented and coordinated throughout the lifetime of the project. (JM 52).

The Applicants have arrived at exaggerated and flawed conclusions regarding the imminence and the extent of the erosion they will face. Witnesses who are either unqualified, or

lack familiarity with all of the facts relating to current site conditions, have relied on outdated, irrelevant and incomplete facts to arrive at incorrect conclusions.

The Department believes that the Little Beach area will temporarily be subjected to high rates of erosion in the future. Piecemeal construction of isolated revetments however, will cause considerable damage to significant protected coastal dune and beach areas, will have potentially devastating consequences for unrevetted areas, and are likely to be flanked and fail. The plan more fully outlined in the FEIR, involving the use of temporary groins filled to entrapment, and a continuous revetment, combined with an ongoing condition requiring beach nourishment, will have negligible long term environmental impact and is acceptable to the Department.

Dept. of Environmental Protection, by

Vincent Maraventano
Assistant General Counsel
Dept. of Environmental Protection
One Winter Street
Boston, MA 02108
Tel (617) 292-5728
FAX (617) 338-5511

Date:

EXHIBIT 1

October 26, 1993

Nicholas B. Spoutter, Esq.
One Washington Street
Wellesley, MA 02181

Re: Alfred B. Nelson
Docket Nos. 90-082 and 92-140
Wetland Variance Decision

Dear M. Soutter:

Enclosed please find the Department's Decision on Request for Variance from the Wetlands Protection Act in connection with the above applicant's request to build a stone revetment in front of his home in Chatham.

Following a thorough review of this proposal based on the regulatory criteria for granting a wetland variance, I find that a variance is not appropriate for this project. This decision is based on a number of factors which are more fully discussed in the text of the decision.

You have the right to appeal this decision. Should you wish to do so, your rights to appeal are explained fully in this decision,

Very truly yours

Daniel S. Greenbaum
Commissioner

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of	)	Docket No. 90-082
	)	File No. SE 10-804
	)	Docket No. 92-140
Alfred B. Nelson	)	File No. SE 10-987

DECISION ON REQUEST FOR VARIANCE

I. ISSUES

Alfred B. Nelson (the "Applicant") owns waterfront property containing a single family house which is located on Morris Island Road, in Chatham. It is located within a coastal beach as defined in 310 CMR 10.27. The Department of Environmental Protection, (the "Department") has also determined that it is within a coastal dune as defined in 310 CMR 10.28. The Applicant contends that the property is subject to increased erosion as a result of the breach of the barrier beach in Chatham caused by a January 1987 storm.

The Department issued two orders denying the Applicant's successive requests to build a stone revetment. The applicant appealed these orders by requesting an adjudicatory hearing. Although the Applicant obtained permission to build a sandbag wall, he still seeks to build a stone revetment.

The Department is precluded, by the Massachusetts Environmental Policy Act ("MEPA"), from making a final

decision granting permission to construct the proposed revetment unless and until an environmental impact report, ("EIR") is prepared evaluating the impacts of this and other revetments in the area of Chatham affected by the breach, G.L. c. 30 s. 61-62H, 310 CMR 11.25-11.27. The Town of Chatham has informed the Department that the draft EIR for phase II will be submitted to the Secretary around November 15, 1993. Once the phase II draft is completed the Department may proceed with the adjudicatory hearing process.

The Department intends to hold an adjudicatory hearing on the Applicant's appeal in accordance with the schedule set forth in Exhibit "A" attached hereto. This schedule will allow the Department to have the information generated by the EIR prior to making its final decision on the proposed project as required by law.

Pursuant to 310 CMR 10.36, the Applicant now seeks permission to build the permanent revetment by asking the Department to issue a variance from its regulations. He has failed to make the showing required by the variance standard set forth in section III of this decision, and for the reasons stated hereafter, the Applicant's request for a variance is denied. If the Applicant decides to appeal this denial, the Department will consider such an appeal in the course of the adjudicatory hearing on the superseding orders.

II. FACTUAL AND PROCEDURAL HISTORY

A coastal storm on January 2, 1987 caused a breach in the outer barrier beach in Chatham. This breach caused enormous changes in erosion rates, water circulation and sedimentation patterns. As a result there have been significant shoreline changes along a large portion of the Chatham coastline

formerly protected by the barrier beach, including the Little Beach area in which the Applicant's property is located.

The breach caused by the 1987 storm has migrated southward, and it is anticipated that it will continue to do so. The beach area to the north of the breach, now known as North Beach, will move to the south, in time providing protection to the Little Beach area again.

In 1988 several owners of affected coastal properties sought permission under the Wetlands Protection Act, G.L. c. 131 s. 40, to build coastal engineering structures, or revetments. As additional property owners have become affected, they have also sought permission to construct revetments.

When proponents of private projects having significant environmental impacts seek a permit from a public agency, the Massachusetts Environmental Policy Act ("MEPA"), requires the preparation of an EIR which evaluates the project in conjunction with other development, or projects existing and expected in the area, G.L. c. 30 s. 62A. Therefore the affected property owners were required to prepare an EIR evaluating the environmental impacts of the proposed revetments on the entire coastal area affected by the breach. See, Certificate of the Secretary of Environmental Affairs (the "Secretary"), dated October 27, 1988.

On March 14, 1990 the Secretary issued a new certificate repeating the requirement that the EIR cover the entire section of the Chatham coast affected by the breach. It also clarified that the area extended from the Chatham fish pier to Morris Island, and included the Little Beach area in which Applicant's property is located.

The Secretary subsequently adopted the town's recommendation that the EIR should be done in two phases.

Phase I addresses the portion of the coast north of the Applicant's property, where revetments have been constructed. Phase II addresses the portion of the affected area from the Applicant's property south to Morris Island. Revetments have not been built in this area, which is not currently jeopardized by erosion.

The EIR on phase I is now complete, and as stated previously, the draft EIR on phase II is expected to be completed around November 15, 1993. A working draft of the EIR states that the Applicant's property is currently in an accretionary stage, and is not experiencing erosion, although conditions may change in the next one to five years. The part of the outer barrier beach located southward of the breach has welded to the shore in the Little Beach area, thereby creating a wide beach area in front of the Applicant's property.

On June 22, 1989, the Applicant filed a Notice of Intent with the Chatham Conservation Commission (the "Commission"), seeking permission to build a stone revetment under both the State Wetlands Protection Act, G.L. c. 130 § 40, and the Chatham Wetlands Protection Regulations enacted under the town by-law. The structure which was labelled an "internally armored dune," consisted of a bottom layer of trap rock covered by a layer of 1/2 ton stones, another layer of two ton stones and a covering layer of sand. The plans indicate a final elevation of 16 feet.

On October 22, 1989 the Commission denied the Applicant permission to build the proposed structure under both the Wetlands Protection Act and the local regulations. The Commission concluded that the Applicant's property was a significant part of a primary dune system and that the proposed structure would significantly interfere with the natural process

of dune migration, storm damage prevention and flood control. The Commission also concluded that in the event of a major storm surge, the structure would exacerbate damage to adjacent structures.

The Applicant appealed the decision of the Commission under the local Wetlands Regulations to the Superior Court, which remanded the case to the Commission. On April 25, 1990, after conducting additional hearings, the Commission issued a new decision solely under the local regulations. In that decision the Commission determined that the proposed structures would have unacceptable environmental impacts on the foreshore and on abutters. The Commission also determined that the Applicant had not submitted adequate information from qualified coastal geologists on present and future erosion patterns and had not evaluated specific alternatives that might have less environmental impact. The Commission stated, that it was

> most concerned with maintaining the ability of the property in question and all of the neighboring properties to disperse and absorb flood waters. The proposed armored dune on the applicant's property will function as a levee under flood conditions and will divert waters to the north and to the south of the structure with the attendant concentration of hydraulic and wave action. In performing this levee function, the armored dune will aggravate flooding and storm damage to adjacent properties, virtually forcing the neighbors into building similar structures. In effect, each structure built forces the problem further down the coast.

The Superior Court upheld this decision.

The Applicant also appealed the Commission's decision by requesting that the Department issue a superseding order. On March 29, 1990 the Department issued that superseding order and denied the Applicant permission to build the proposed project was located on a significant coastal dune.[6] The Department also determined that the proposed structure did not meet the performance standards set forth in the regulations, 310 C.M.R. 10.28(3)(a) and (d) in that the proposed revetment would affect the ability of waves to remove sand from the dune and would obstruct the movement of sediment to downdrift beaches.

On December 23, 1991 the Applicant filed a second notice of intent seeking permission to build a similar revetment. The Commission found that the revised project was more extensive than the previously proposed structure and again issued an order of conditions denying the Applicant permission to build under both the Wetlands Protection Act and the Chatham regulations.

The Applicant again appealed the Commission's decision under the Act by requesting that the Department issue a superseding order. On November 9, 1992, the Department again issued a superseding order denying the Applicant

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[6] The area on which Applicant's property is located was designated a significant coastal dune pursuant to GL c. 130 s. 105. An order has been issued pursuant to said statute, and recorded at the Barnstable Registry of Deeds on August 1, 1982, which provides at paragraph 3 (G) that "coastal engineering structures may be allowed only where such structures will have no adverse effects on adjacent property or downcoast areas".

permission to build a stone revetment. The Department determined that the second proposed revetment interfered with the ability of the coastal dune to act as a sediment source for downdrift properties, would increase the erosion of downdrift beaches and interfere with the lateral movement of the dune. The Applicant again appealed this superseding order by requesting an adjudicatory hearing.

In the meantime, the Applicant's emergency request for permission to build a temporary dura bag[2] wall, had been denied by the Town of Chatham in May 1992. Permission to build such a wall, was granted by the Department on May 11, 1992 and was authorized by the Secretary on May 19, 1992, in order to provide protection to the Applicant's house until the EIR was completed. The Applicant constructed a dura bag wall which provides significant protection for his home.

Most recently, on September 20, 1993, the Applicant requested a variance from the Department's regulations governing coastal beaches and dunes.

III. VARIANCE STANDARD

The provisions of the Department's regulations pertaining to coastal banks, coastal beaches and coastal dunes at 310 C.M.R. 10.00 *et seq.* may be waived upon a finding by the Commissioner that:

> (1) there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with the regulation(s);

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[2] Dura bags are firmly packed sand in synthetic bags, are very heavy, and can be as long as twenty feet in length.

(2) that mitigating measures are proposed that will allow the project to be conditioned so as to contribute to the protection of the interests identified in the Act; and

(3) that the variance is necessary to accommodate an overriding community, regional, state or national public interest; or that it is necessary to avoid an Order that so restricts the use of property as to constitute an unconstitutional taking without compensation.

Procedure.

A request for a variance shall be made in writing and shall include, at a minimum, the following information:

(a) a description of alternatives explored that would allow the project to proceed in compliance with the regulation(s) and an explanation of why each is unreasonable;

(b) a description of the mitigating measures to be used to contribute to the protection of the interests identified in the Act; and

(c) evidence that an overriding public interest is associated with the project which justifies waiver of the regulation(s) or evidence that the Superseding Order so restricts the use of the land that it constitutes an unconstitutional taking without compensation.

310 CMR 10.36.

IV. DISCUSSION

The Applicant has not shown that he meets any part of the above standard for obtaining a variance. He has not identified any specific mitigation measures he proposes to implement to address adverse impacts created by his proposed revetment. He has also failed to explore alternatives that would enable him to

obtain protection from storms and erosion in a manner consistent with the regulations or to explain why such alternatives are not reasonable.

The Applicant's failure to address alternatives is particularly significant. Important alternatives which he has failed to address include cooperative beach nourishment and a sandbag wall. He has not thoroughly evaluated alternatives involving the relocation of the house, raising the elevation of the house, or a combination of more than one ot the above measures.

The Applicant has not provided any evidence regarding the cost of beach nourishment in the area. He has not indicated whether there have been any efforts to undertake beach nourishment in cooperation with other neighboring properties. Nor has he addressed the issue of whether a cooperative beach nourishment program would be more successful and more cost effective than the isolated efforts attempted in the past.

In addition, the Applicant has not provided any evidence that a sandbag wall similar to that already permitted pursuant to the emergency certification is not an acceptable solution. As the area of impact caused by the breach migrates to the south of the Applicant's property, his vulneerability to erosion and storm damage will be dramatically reduced. In these circumstances, there may be good reason to use a sandbag wall rather than a stone revetment, since sandbags can be easily removed when no longer necessary. Accordingly, the continued use of a sandbag wall should be evaluated.

In addition to beach nourishment and a sandbag wall, the Applicant has not thoroughly considered the possibility of moving his house further back from the sea or elevating it. After visiting the site, the Department is of the opinion that the Applicant has ample room to relocate the house. The Applicant has presented no expert geological evidence that the anticipated rate of erosion prior to the southward migration of the breach would make such relocation futile. The Applicant's conclusory allegation that "there is no likelihood that the

houses could be moved back or stilted" is insufficient to establish that these alternatives are not feasible. He has failed to present any credible evidence on the costs of relocating or elevating the house.

To the extent that the Applicant has rejected relocation and elevation due to anticipated costs, consideration should be given to the availability of public funds to ameliorate the burdens that such costs may place on individual homeowners who choose to take such measures. The State Hazard Mitigation Grant Committee comprised of several agencies, including the Department and the Office of Coastal Zone Management, recommended that $200,000 be allocated to the Chatham area from the Federal Emergency Management Agency, ("FEMA") Hazard Mitigation Fund. Such allocation has been approved ans priority is to be given to funding flood mitigation measures in the Little Beach area. As stated in the working draft of the EIR, it should be emphasized that,

> . . . the Little Beach area is low and floods from many locations depending on the size and direction of storm approach. Protection from flooding must come from a combination of raising structures and other flood-proofing measures outlined in the Town's hazard mitigation plan.

The Applicant has also failed to satisfy the other aspects of the variance standard. He has not presented any evidence of the existence of an overriding public interest that would justify the granting of the requested variance. He has also failed to present any evidence that, in the absence of the requested variance, the application of the regulations to his property would result in a taking for which he is entitled to compensation. In the absence of such evidence, and the Applicant's failure to explore alternatives to the proposed project and to consider its effect on the surrounding area, it is

premature for me to further discuss those aspects of the variance standard relating to either the existence of an overriding public interest, or relating to a taking for which the Applicant would be entitled to compensation.

I anticipate that many if not all of the above issues will be fully explored and analyzed in the EIR to be completed shortly. I am sympathetic to the Applicant's situation as shown by my willingness to expedite this decision and to hold an adjudicatory hearing on the expedited timetable previously discussed. At the same time, permanent revetments in dune areas present major environmental problems and I am obligated to fully consider the availability of alternatives less damaging to the environment as well as the effects of the proposed project on neighboring coastal property owners. Upon completion of the necessary EIR process I direct my staff to meet with the Applicant or his representatives to review the merits of his proposal in light of the findings and recommendations of the EIR regarding comprehensive solutions to the problems of the entire coastal area.

V. APPEAL RIGHTS

This order is an action of the Department. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing, and postmarked within ten (10) business days of the date this order was issued. . . .

DANIEL S. GREENBAUM
COMMISSIONER

EXHIBIT "A"

The MEPA office of the Secretary of Environmental Affairs will issue a Certificate on the Draft Environmental Impact Report approximately six weeks after it is filed. It is anticipated that a draft report will be filed soon, and that such a certificate will be issued before the end of 1993.

Within one month from the issuance of the MEPA certificate, the Department will hold a prehearing conference on the Applicant's appeal of its denial of a Superseding Order of Conditions.

Within one month from the date of the prehearing conference the Applicant will file with the administrative law judge, all pre-filed direct testimony which the applicant intends to introduce in the adjudicatory hearing. Within one month thereafter, the Commonwealth and the Town of Chatham will file all pre-filed direct testimony which they intend to introduce at the adjudicatory hearing.

The hearing will commence within one month from the filing of all pre-filed direct testimony. The hearing record will close fourteen business days from the later to occur of the end of the hearing or the issuance by the MEPA office of a final Environmental Impact Report.

A decision will be issued within sixty days from the date that the hearing record closes.

It is within such administrative law judge's discretion to determine whether the hearing on the appeal of the Superseding Order of Conditions will be bifurcated from the hearing of the appeal of the variance denial.

May 11, 1992

Nicholas B. Soutter, Esq.
Attorney at Law
One Washington Street
Wellesley, MA 02181

RE: Chatham—Wetlands
Emergency Certification
Alfred B. Nelson
27 Morris Island Road

Dear Mr. Soutter:

The Department of Environmental Protection is in receipt of your request, dated May 7, 1992, for an Emergency Certification at the above-referenced address. The Department is issuing the enclosed Emergency Certification to install sand-filled bags as a temporary measure to abate erosion threatening the Nelson home, in accordance with an agreement reached with the Office of the Attorney General, as set forth in a letter, dated January 29, 1992 (copy attached). This Emergency Certification is issued pursuant to the Wetlands Protection Act, M.G.L., c. 131, Section 40, and subject to the specified written conditions.

This Emergency Certification allows the temporary use of sand-filled bags, as proposed by the Nelsons, to abate the emergency until such time as all necessary permits may be obtained for a more permanent solution which complies with the performance standards of the Wetland Protection Act Regulations, 310 CMR 10.00. As you know, the Nelsons must comply with the requirements of the Massachusetts Environmental Policy Act, before the Department can issue a Final Order of Conditions approving any project proposing the

alteration of the primary dune. It is therefore necessary that the Nelsons fully participate in the development and implementation of the comprehensive plan (Environmental Impact Report) which is currently being pursued by the Town of Chatham to address the erosion caused by the Chatham Breach, or prepare their own Environmental Impact Report which meets the requirements of the Secretary of the Executive Office of Environmental Affairs.

Please be advised that the Department views this method of erosion abatement as temporary in nature, and once again strongly urge4s the Nelsons to elevate the house, and move it landward of its present location. The Department is willing to assist with this effort, and to expedite such a request to relocate the dwelling in accordance with the Wetlands Protection Act.

If you have any questions, or need additional information, please contact me, of Jim Mahala, at telephone number (508)946-2800, or at the above referenced address.

Very truly yours,

Elizabeth A. Kouloheras, Chief
Wetlands Section

COMMONWEALTH OF MASSACHUSETTS
WETLANDS PROTECTION ACT AND REGULATIONS,
G.L. 131, § 40, 310 CMR 10.00

EMERGENCY CERTIFICATION

FROM: Department of Environmental Protection

TO: Nicholas B. Soutter	Alfred Nelson
(Name of Applicant)	(Name of Property Owner)
One Washington Street	27 Morris Island Road
(Address)	(Address)
Wellesley, MA, 02181	Chatham, MA, 02633

DATE: May 11, 1992

LOCATION: 27 Morris Island Road

FINDINGS:

1. The Department hereby certifies pursuant to 310 CMR 10.06 that the work described below is necessary for the protection of the health and safety of the Citizens of the Commonwealth and will be performed by or has been ordered to be performed by an agency of the Commonwealth or a subdivision thereof.

2. A site inspection was performed on May 7, 1992.

3. The agency authorizing the emergency work is the Office of the Attorney General . (Not the commission unless work is on land owned or controlled by them.)

4. Describe below, the work which is allowed to proceed under this certification. No work beyond that necessary to abate the emergency may be so certified.

Placement of sandbags within a Coastal Dune, 310 CMR 10.28 and a Coastal Beach, 310 CMR 10.27, in accordance with the plan entitled "NELSON PROPERTY", dated May 6, 1992, signed by R.H. Wilson, P.E., provided that the owners' permission is obtained to install the sandbags on their property in accordance with condition numbers 6 & 7 below. Additional emergency certification, pursuant to the Wetlands Protection Act, is necessary prior to the replacement of any damaged bags. See additional conditions #'s 1-12, attached.

5. The above-described work shall be completed by June 10, 1992(date). (Work performed under an Emergency

Certification shall not exceed 30 days from the date of certification unless the Commissioner of DEP so approves.

Issued by:

Elizabeth A. Kouloheras, Chief
Wetlands Section

Special Conditions-Emergency Certification-Alfred B. Nelson, 27 Morris Road, Chatham

1. The sand to be used will be special borrow quality sand with less than 10% passing the #200 sieve (fines) of a grain size comparable to the existing beach/dune sand.
2. The sand shall be brought in from a suitable upland off-site location. Use of existing beach/dune sand is prohibited. Verification of the borrow pit may be required.
3. Any fill required to support the sand filled bags shall be consistent with the grain size as referenced under special condition #1.
4. Use of cement concrete or a similar hardening add-mixture within the bag is prohibited.
5. For drainage purposes 4 inch PVC pipe should be installed at 10 feet on center for every other course of sandbags.
6. The plan of record for Chatham Wetlands File No. SE# 10-987, dated 12/26/91, by Coastal Engineering Co., references Bearse's Lane as a 20 foot wide Town Way. Whereas, your proposal calls for crossing Bearse's Lane and connecting the sandbags with the existing stone revetment at the Chatham Beach and Tennis Club prior approval of the property owners (for Bearse's Lane and the Beach and tennis Club) will be required.
7. In the absence of the granting of property rights, a sandbag return may be installed on the Nelson property, parallel and adjacent to Bearse's Lane and Mr. Nelson's Northern property line.

8. The existing "unpermitted" timber bulkhead must be removed within 30 days upon completion of the installation of the sand filled bags.
9. Any work proposed below Mean High Water, will require your obtaining emergency authorization pursuant to M.G.L., c. 91.
10. Because the Nelsons own more the 300' of property between the existing dwelling, and Morris Island Road, the Department strongly recommends that the property owners investigate the feasibility of relocating the house landward of its present location, and/or elevating the house of a properly designed pile foundation, above the Base Flood Elevation.
11. Upon the showing of any adverse affect the Department reserves the right to order the removal or modification of the sand filled durabags.
12. It is an express condition of this Emergency Certification that the Nelsons take, as expeditiously as possible, all necessary steps to obtain the permits required for a permanent solution to protect the structure. Failure to meet this condition may be cause for the Department to require the Nelsons to remove the sandbags permitted under this Emergency Certification, or to take other measures to bring the Nelsons into compliance with the Wetlands Protection Act.

TOWN OF CHATHAM

Conservation Commission

FINDINGS ON APPLICATION FOR PERMIT
UNDER WETLANDS PROTECTION BY-LAW

APPLICANT: Alfred B. Nelson

ADDRESS: P.O. Box 8995
Naples, FL 33940

LOCATION OF WORK: 27 Morris Island Road

After public hearing in accordance with open meeting law M.G.L. Ch. 39, s. 23B, closed on January 28, 1992 , the Chatham Conservation Commission, in accordance with the Town of Chatham Wetlands By-Law finds:

Permit is granted - work may proceed;

Permit is denied;

This project is denied because it does not meet the performance standards of the Town of Chatham Wetlands Protection By-Law, 2.02 and 2.03.

Conservation Commission

SUPERSEDING
Order of Conditions
Massachusetts Wetlands Protection Act
G.L. c. 131, §40
DENIAL

From Department of Environmental Protection

To Alfred Nelson (Name of Applicant) — Same (Name of property owner)

Address 401 Edwards - 1500 Shreveport, LA 71101 — Address Same

This Order is issued and delivered as follows:

by hand delivery to applicant or representative on (date)

x by certified mail, return receipt requested on March 29, 1990(date)

This project is located at 27 Morris Island Road

The property is recorded at the Registry of Deeds, Barnstable

Book Page

Certificate(if registered) 29197, 68253

Notice of Intent for this project was filed on June 22, 1989
(date)

The public hearing was closed on September 6, 1989
(date)

Findings

The Department has reviewed the above referenced Notice of Intent and plans and has held a public hearing on the project. Based on the information available to the Department at this time, the Department has determined that the area on
Effective 11/10/89 5-1
which the proposed work is to be done is significant to the following interest in accordance with the Presumptions of Significance set forth in the regulations for each Area Subject to Protection Under the Act(check as appropriate):

Public water supply x Flood control Land containing shellfish
Private water supply x Storm damage prevention Fisheries
Ground water supply Prevention of pollution
x Protection of wildlife habitat

Total Filing Fee Submitted State Share
City/Town Share (0 fee in excess of $25)
Total Refund Due $ City/Town Portion $ State Portion $

(0 total) (0 total)

Issued by the Department of Environmental Protection

Signature

Elizabeth A. Kouloheras, Chief, Wetlands Section

On this 29th day of March 19 90 , before me personally appeared Elizabeth A. Kouloheras to me known to be the person described in and who executed the foregoing instrument and acknowledged that he/she executed the same as his/her free act and deed.

Jeanne E. Turney — Sept. 21, 1995

Notary Public — My commission expires

The applicant, the owner, any person aggrieved by the Superseding Order, any owner of land abutting the land upon which the proposed work is to be done, or any ten persons pursuant to G.L. c. 30A §10A, are hereby notified of their right to request an adjudicatory hearing pursuant to G.L. c. 30 §10A, providing the request is made be certified mail or hand delivery to the Department, with the appropriate filling fee and Fee Transmittal Form as provided in 310 CMR 10.03(7), within ten days from the date of issuance of this Superseding Order, and is addressed to: Docket Clerk, Office of General Counsel, Department of Environmental Protection, One Winter Street, Boston, MA 02108. A copy of the request shall at the same time be sent by certified mail or hand delivery to the conservation commission, the applicant, and any other party.

. . .

SUPERSEDING
Order of Conditions
Massachusetts Wetlands Protection Act
G.L. c. 131, §40
DENIAL

From Department of Environmental Protection

To Lewis Hicks, III (Name of Applicant) Same (Name of property owner)

Address Box 6308 Lawrenceville, NJ 08648 Address Same

This Order is issued and delivered as follows:

by hand delivery to applicant or representative on (date)

x by certified mail, return receipt requested on November 20, 1990(date) P 707 026 846

This project is located at 40 Dune Drive

The property is recorded at the Registry of Deeds, Barnstable

Book 1342 Page 997

Certificate(if registered)

Notice of Intent for this project was filed on February 5, 1990 (date)

The public hearing was closed on March 21, 1990 (date)

Findings

The Department has reviewed the above referenced Notice of Intent and plans and has held a public hearing on the project. Based on the information available to the Department at this time, the Department has determined that the area on
Effective 11/10/89 5-1
which the proposed work is to be done is significant to the following interest in accordance with the Presumptions of Significance set forth in the regulations for each Area Subject to Protection Under the Act(check as appropriate):

Public water supply x Flood control Land containing shellfish
Private water supply x Storm damage prevention Fisheries
Ground water supply Prevention of pollution
x Protection of wildlife habitat

Total Filing Fee Submitted 250.00 State Share 112.50

City/Town Share 137.50 (0 fee in excess of $25)
Total Refund Due $ City/Town Portion $ State Portion $

(0 total) (0 total)

Issued by the Department of Environmental Protection

Signature

Elizabeth A. Kouloheras, Chief, Wetlands Section

On this 20th day of November 19 90 , before me personally appeared Elizabeth A. Kouloheras to me known to be the person described in and who executed the foregoing instrument and acknowledged that he/she executed the same as his/her free act and deed.

Jeanne E. Turney
Notary Public

Sept. 21, 1995
My commission expires

The applicant, the owner, any person aggrieved by the Superseding Order, any owner of land abutting the land upon which the proposed work is to be done, or any ten persons pursuant to G.L. c. 30A §10A, are hereby notified of their right to request an adjudicatory hearing pursuant to G.L. c. 30 §10A, providing the request is made be certified mail or hand delivery to the Department, with the appropriate filling fee and Fee Transmittal Form as provided in 310 CMR 10.03(7), within ten days from the date of issuance of this Superseding Order, and is addressed to: Docket Clerk, Office of General Counsel, Department of Environmental Protection, One Winter Street, Boston, MA 02108. A copy of the request shall at the same time be sent by certified mail or hand delivery to the conservation commission, the applicant, and any other party.

. . .

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of	)	DEP Docket No. 92-140
	)	File No. SE 10-987
Alfred B. Nelson	)	
	)	
	)	
In the Matter of	)	DEP Docket No. 92-152
	)	File No. SE 10-1027
Lewis W. Hicks	)	
	)	

PRE-FILED TESTIMONY OF JAMES MAHALA

Qualifications

I. My name is James Mahala. I have been employed by the Department of Environmental Protection, Division of Wetlands, as an Environmental Analyst since September 1986, and since December 1990, as an Environmental Analyst IV.

II. I hold a Bachelor of Science degree in Geology from the State University of New York at Oneonta (1982) and a Master of Science degree in Coastal Geology from Western Washington University (1985).

III. I have co-authored the following publications:

- Schwartz, M.L., Mahala, J., and Bronson, H.S., 1985,

Net Shore-Drift Along the Pacific Coast of Washington State: Shore and Beach, v. 53, pp. 21-25.

- Schwartz, M.L., and Mahala, J., 1985, Clallam County, Washington, Net Shore-Drift: Washington State Department of Ecology, 13 p.

- Schwartz, M.L., and Mahala, J., 1985, Jefferson County, Washington, Net Shore-Drift: Washington State Department of Ecology, 11 p.

IV. I have co-authored the following abstracts:

- Schwartz, M.L., Mahala, J., and Bronson, H.S., Net Shore Drift Along the Pacific Coast of Washington State: Geological Society of America, Cordilleran Section, Vancouver, B.C., Canada, May 1985.

- Schwartz, M.L., Mahala, J., and Bronson, H.S., Net Shore Drift Along the Pacific Coast of Washington State: West Coast Regional Coastal Design Conference, Oakland, CA, November, 1985.

5. My work at the Department includes administering and enforcing the Wetlands Protection Act ("the Act"), M.G.L., c. 131, s.40, and the regulations that implement the Act at 310 CMR 10.00. My responsibilities include the review of designs of coastal engineering structures proposed in coastal areas protected by the Act. I also provide technical expertise on the impacts of proposed projects on such areas.

6. In the performance of these duties I review Notices of Intent, site plans, and complex calculations and write Orders of Conditions, Determinations of Applicability, Enforcement Orders, Notices of Noncompliance, and Penalty Assessment Notices. These duties require that I conduct on-site inspections to identify and delineate coastal and inland wetland resource areas, including coastal dunes, coastal beaches and coastal

banks. I also assess the potential impact of proposed projects on the statutory interests of the Act. As an Environmental Analyst IV, I am also responsible for reviewing the work of wetlands staff of lower grade.

7. During my tenure with the Department I have conducted over 300 on-site inspections. Most of my field experience with the Department has been along the Massachusetts coastal zone, with a particular emphasis on Cape Cod. I have qualified and testified as an expert witness in several adjudicatory proceedings before the Department on the extent and type of coastal resource areas as well as the impact of proposed activities on such areas. I have submitted technical affidavits in court supporting the scientific basis of the Coastal Wetland Regulations. I have provided technical assistance to the Division of Waterways, Department of Environmental Management, the State Attorney Generals' Office, andto local Conservation Commissions.

8. I am familiar with the shoreline of Chatham, and I have personally worked on at least ten (10) revetment proposals along the inner-shoreline of Pleasant Bay (Chatham Harbor). I have conducted numerous on-site inspections (approximately 25 site visits) along the Chatham shoreline since the formation of the new inlet and have provided technical assistance to the Town of Chatham and Aubrey Consulting, Inc., in developing the Environmental Impact Report for this area. I most recently visited this area on April 26, 1994.

History of the Proceedings

9. On or about December 23, 1991, Alfred B. Nelson filed a Notice of Intent with the Conservation Commission in the town of Chatham and the Department (Ex. 1) describing the construction of a stone revetment upon a coastal beach. On or

about May 15, 1992, Lewis W. Hicks, filed a Notice of Intent with the Conservation Commission in the town of Chatham and the Department (Ex. 2) describing the construction of a stone revetment behind a primary coastal dune.

10. On January 16, 1992, the Department issued file number SE 10- 987 to Mr Nelson's filing and on June 5, 1992, the Department issued file number SE 10-1027 to Mr. Hick's filing.

11. On or about January 30, 1992, the Chatham Conservation Commission issued an Order of Conditions (Ex. 3) denying the project proposed by Mr. Nelson. The Commission's Order of Conditions denied the proposed project because the proposal did not meet the performance standards for Coastal Beaches (310 CMR 10.27) and Coastal Dunes (310 CMR 10.28). On or about July 2, 1992, the Chatham Conservation Commission issued an Order of Conditions (Ex. 4) denying the project proposed by Mr. Hicks. The Commission's Order of Conditions denied the proposed project because the proposal did not meet the performance standards for Coastal Dunes (310 CMR 10.28).

12. On July 8, 1992, Nicholas B. Soutter, Esq., representing Mr. Nelson, appealed the Commission's Order of Conditions to the Department. On February 7, 1992, Mr. Soutter, representing Mr. Hick's, appealed the Commission's Order of Conditions to the Department.

13. On April 7, 1992, I conducted an on-site inspection of the Nelson property. On November 7, 1989, I conducted an on-site inspection of the Nelson property in conjunction with a previous wetland filing. The Department waived the on-site inspection of the Hick's property, in accordance with 310 CMR 10.05 (7)(i), because said inspection would not have been

either necessary or useful for a proper and complete review of the proposed project. I had previously inspected Mr. Hick's property on February 1, 1988,and on several other occasions prior to waiving the on-site inspection.

14. On October 20, 1992, the Department issued a Superseding Order of Conditions denying the Nelson's proposal (Ex. 5). On November 9, 1992, the Department issued a Superseding Order of Conditions denying the Hick's proposal (Ex. 6). The Department's Orders cited as the reasons for denial its determination "that the project area is significant to storm damage prevention and flood control." Specifically, the Department denied the proposed projects because the proposed revetments would result in impacts to the coastal beach and coastal dune that do not meet the performance standards established by 310 CMR 10.27 and 10.28. Furthermore, the Department determined that the proposed revetments would not comply with terms of a Wetland Restriction Order which was recorded at the Registry of Deeds against the subject properties pursuant to M.G.L., Chapter 130, Section 105 (Ex. 7— July 1, 1982 Wetlands Restriction Order), (Ex. 8—Wetlands Restriction Program Aerial Photograph, April/May, 1978). The Department determined that the proposed revetments would obstruct the movement of sediment and would adversely affect adjacent properties and downcoast areas. These impacts are expressly prohibited under the terms of the Wetland Restriction Order.

15. On October 28, 1992, Nicholas B. Soutter, Esq., representing Mr. Nelson, appealed the Department's Superseding Order ofConditions for an adjudicatory hearing. On November 20, 1992, Mr. Soutter, representing Mr. Hick's,

appealed the Department's Superseding Order of Conditions for an adjudicatory hearing.

16. The Department's Superseding Orders of Conditions informed the applicants that because the proposed projects involve the alteration of a primary dune, if the Superseding Orders were appealed, the Applicants would be required to file an Environmental Notification Form (ENF) pursuant to the Massachusetts Environmental Policy Act (MEPA). Mr. Nelson filed an ENF (EOEA #8133), (Ex. 9), and received a Certificate from the Secretary of Environmental Affairs on March 14, 1990, (Ex. 10), requiring the preparation of an Environmental Impact Report (EIR). The area immediately to the north of the Nelson property was the subject of an earlier MEPA filing, EOEA #7345, for which an EIR was also required. The Secretary subsequently amended the scope for EOEA #7345 and requested that a single EIR analyze the entire shoreline from Aunt Lydia's Cove on the north to Morris Island on the south. Aubrey Consulting, Inc. (ACI), hired by the Town of Chatham and others, accomplished this by analyzing the Chatham shoreline in two phases. The Phase I EIR dealt with the adequacy of revetment construction and mitigation from Aunt Lydia's Cove to the Chatham Beach and Tennis Club. The Phase II EIR, (Exhibit 11—Phase II DEIR, December 6, 1993), analyzed various shoreline protection alternatives for the unprotected area commencing south of the Beach and Tennis Club to Morris Island. The MEPA scope for the Phase IIarea also mandated that mitigation requirements and the significance of each coastal wetland resource area be evaluated. The Nelson and Hicks properties are both included in the Phase II EIR.

17. In the October 27, 1988, Certificate (EOEA #7345) and again in the March 14, 1990, Certificate (EOEA #8133), the Secretary of Environmental Affairs requested that a single EIR be prepared so that a comprehensive system-wide solution to the coastal erosion problems could be addressed. A comprehensive EIR is necessary to inform the regulatory agencies of the potential effects of various shoreline protection alternatives and to develop an appropriate mitigation and monitoring program to ensure that adjacent and downdrift property owners are not adversely effected by ill-advised coastal construction. Further, an EIR prepared from a regional perspective is the preferred way to study the Chatham shoreline due to the complex and dynamic nature of the Nauset breach cycle and its resulting erosion patterns.

Site Description and Significance

18. The Nelson property is located immediately south of the Chatham Beach and Tennis Club. The Nelson property is bounded on the south by an undeveloped lot also owned by the Nelsons. Presently, the Nelson dwelling is fronted by a primary coastal dune and an approximately 300 foot wide coastal beach.

19. The Hicks property is located at the eastern end of Dune Drive about 1000 feet south of the Nelson property. The Hicks' dwelling is fronted by a primary coastal dune and a broad coastal beach significantly wider than that found in front of the Nelson's dwelling. Commencing at the Hicks property (near the house) and continuing southward is a distinct break in slope between the fronting coastal dune and an area of artificial fill. Absent subsurface boring information on the characteristics of the fill sediments, I would delineate the fill area as coastal dune in accordance with the definition at 310

CMR 10.28 (2) which states, in part, that "Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention and flood control." Further, the U.S. Geological Survey has identified both the Nelson and Hicks properties as containing Beach Deposits, designated as "(Qb)"; and Dune Deposits, Undifferentiated, designated as "(Qd)" (Ex.12—USGS Chatham Quadrangle, GQ-911, 1970). Thus, it is likely that the artificial fill overlays a coastal dune deposit.

20. The following is a brief review of the regional coastal geology. On January 2, 1987, during a severe northeasterly storm, Nauset Beach was breached at a point almost directly east of Chatham Lighthouse. The new inlet resulted in an increase in tidal range and wave energy within Chatham Harbor producing coastal erosion and channel shoaling problems.

21. Numerous studies have contributed to the understanding of the evolution of the Nauset Beach-Monomoy barrier system, (Exhibit 13— Geise, Graham, S., "Cyclical Behavior of the Tidal Inlet at Nauset Beach"), (Ex. 14 — Geise, Aubrey and Liu, "Cyclical Behavior of the Tidal Inlet at Nauset Beach, Chatham, MA"). One particularly interesting feature of the system's behavior is its approximately 150-year cycle of change. To describe the process briefly, the cycle occurs as the Nauset barrier beach system elongates to the south and begins to increasingly restrict the entrance channel to Pleasant Bay (Chatham Harbor). Eventually, this process sets up the conditions necessary for a breach of Nauset Beach to develop into a new inlet. Prior to the 1987 breach of Nauset Beach, the geomorphological and hydrodynamical conditions existed such that the probability of such a breach and new inlet development was relatively high. The last cycle in the Nauset

Beach barrier was initiated in 1846 during a severe coastal storm when the barrier breached and a new inlet formed.

22. The January 1987 breach of Nauset Beach and subsequent development of a new inlet represents a new cycle in the history of the Nauset barrier system. Presently, the new inlet is responsible for the increase in tidal range and shoreline erosion within Pleasant Bay (Chatham Harbor) and in the vicinity of the Applicants' properties. However, as littoral drift causes the new inlet, and eventually North Beach, to migrate southward over time, the focus of coastal erosion will also shift south of the Applicants' properties.

23. Current site conditions in the immediate vicinity of the Applicants' properties indicate that a broad, low-lying barrier sand spit offers considerable protection to the Little Beach area, including the Applicants' properties. This barrier spit is attached to the mainland at approximately the Chatham Lighthouse and extends out to South Beach.

24. The Draft EIR (DEIR) states that "At the time this DEIR was written there was no erosion problem in the Little Beach area. Instead, there has been rapid accretion at the north end of Little Beach during the past few years." The rapid accretion is related to the formation of the barrier spit referred to in paragraph 23 above. I agree with the DEIR in this regard.

25. Aubrey Consulting, Inc. (ACI) predicts that the Applicants' properties will be threatened in the near future. I agree that the Applicants' properties will eventually be threatened due to erosion. ACI predicts that it will take between 2 - 10 years for the spit connecting South Beach with the mainland to breach and break up, thereby exposing the Applicants' properties to wave attack. In the long term,

however, the cycle of the Nauset barrier beach system indicates that the Applicants' properties will eventually receive greater protection due to southward moving littoral drift causing North Beach to migrate southward over time. As a result of this littoral drift, the focus of coastal erosion will begin to shift south of the Applicants' properties. This is one of the unique features of this complex coastal system.

26. Coastal beach, is defined as "unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing man- made structures, when these structures replace one of the above lines, whichever is closest to the ocean." 310 CMR 10.27 (2) "Coastal beaches dissipate wave energy by their gentle slope, their permeability and their particulate nature, which permits changes in beach form in response to changes in wave conditions." 310 CMR 10.27(1).

27. A critical characteristic of coastal beaches is their ability to respond to changes in wave action. Wave action is the principal driving force responsible for the transport of beach sediments. The oblique approach of waves moves sediment along shore in the general direction of wave travel. The net rate of longshore beach sediment transport depends upon the angle of wave approach, the wave energy, and the wave steepness (the ratio of wave height to wave length). The characteristics of the sediment being transported, as well as the form of the beach, also affects the rate of longshore sediment transport.

28. As deep water waves approach the shore they begin to feel the bottom. Contact with the bottom transforms the wave

form causing it ultimately to break upon the beach. This breaking generates turbulence in the water which dissipates wave energy and transports sediment lifted off the bottom. Most of the remaining wave energy is dissipated as the turbulent mass rushes up the beach slope, with some of the energy lost by percolation into the beach.

29. When there is an increase in the incoming wave energy, as in larger storms, the beach adjusts its profile to facilitate the dissipation of the additional energy. This is accomplished by transporting beach sediment seaward resulting in the formation of an offshore bar. The offshore bar causes waves to break further seaward, widening the surf zone over which wave energy will be dissipated. Tides compound the dynamic beach response by constantly changing the elevation at which the water intersects the shore. Thus, the beach is always adjusting to changes in both wave energy and water level.

30. The motion of beach sediment in response to wave action has been studied by marking the sediment with fluorescent dyes and tracing its movement. When waves strike the shore at an angle sediment grains move alongshore in the general direction of wave travel. Thus, the coastal beach at any point serves as a sediment source for the beach down the shore from that point.

31. Coastal beaches serve as a sediment source for dunes and subtidal areas as well. Steep storm waves cause beach sediment to move offshore, resulting in reduced beach volume, gentler beach slope and greater energy dissipation for nearshore areas of land under the ocean. Following storms, less steep waves return sediment landward and the beaches can recover to approximately pre-storm conditions. The net movement of sediment, either onshore or offshore, at a particular location

depends upon many factors including the characteristics of the sediment, the beach, or the nearshore land under the ocean, the nearshore hydraulics, and the incoming waves, all of which are interdependent. Along the inner shoreline of Chatham, onshore/offshore sediment transport is further complicated due to the presence of strong tidal currents in the navigational channel which lies close to the inner shore.

32. Coastal beaches serve the purpose of storm damage prevention and flood control by dissipating wave energy and by providing sediment to supply other coastal wetland resource areas including coastal dunes, nearshore areas of land under the ocean and other coastal beaches.

33. Coastal dune, as defined at 310 CMR 10.28 (2), means "any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control." Coastal dunes occur either as part of a barrier beach complex or fronting a coastal bank or upland. The coastal dunes in the vicinity of the applicant's properties are backed by coastal banks, artificial fill areas and/or uplands. Coastal dunes aid in storm damage prevention and flood control by supplying sand to coastal beaches, thereby furthering the dissipation of wave energy. Coastal dunes protect inland coastal areas from storm damage and flooding by storm waves and storm elevated sea levels because such dunes are higher than the coastal beaches which they border. In order to protect this function, coastal dune volume must be maintained while allowing the coastal dune shape to conform to natural wind and water flow patterns. On retreating shorelines, the ability of coastal dunes bordering the coastal beach to move landward at

the rate of shoreline retreat allows these dunes to maintain their form and volume, which in turn promotes their function of protecting against storm damage or flooding.

34. For the aforementioned reasons the Department has determined that the project sites are significant to the statutory interests of flood control and storm damage prevention.

Effects of the Proposed Work

35. The Nelson project involves the construction of a 320 foot long, two-sided revetment along the landward edge of a primary Coastal Dune. The proposed revetment would be constructed acrossboth lots owned by the Nelson's. The revetment would consist of a 2-4 ton primary armor stone layer, a 2-4 ton secondary armor stone layer, a 0.5 ton stone cover layer placed over an eighteen inch thick layer of 6-8 inch trap rock bedding which in turn would be placed over filter cloth. The landward side of the proposed revetment would consist of a 2-4 ton armor layer, a 0.5 ton stone cover layer placed over an eighteen inch thick layer of 6-8 inch trap rock bedding which in turn would be placed over filter cloth. The top elevation of the revetment would be set at 16 feet above mean sea level.

36. The Hicks' project involves the construction of a 125 foot long two-sided revetment along the landward edge of a Coastal Dune. The Hicks' revetment utilizes the same design as the Nelson's revetment.

37. Because the proposed revetments would be emplaced in a Coastal Dune they must comply with the performance standards for Coastal Dunes at 310 CMR 10.28 (3). These standards require that "any alteration of, or structure on, a coastal dune or within 100 feet of a coastal dune shall not have an adverse effect on the coastal dune by:

(a) affecting the ability of waves to remove sand from the dune;

(b) disturbing the vegetative cover so as to de-stabilize the dune:

(c) causing any modification of the dune form that would increase the potential for storm or flood damage;

(d) interfering with the landward or lateral movement of the dune;

(e) causing any removal of sand from the dune artificially; or

(f) interfering with mapped or otherwise identified bird nesting habitat."

38. Because the proposed revetments would be emplaced within the buffer zone of a Coastal Beach it must comply with the performance standards for Coastal Beaches at 310 CMR 10.27 (3). These require that "any project on a coastal beach, except any project permitted under 310 CMR 10.30 (3)(a), shall not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any such coastal beach or an adjacent or downdrift beach."

39. The construction of two separate revetments will not meet the performance standards for Coastal Dunes at 310 CMR 10.28 (3) (a), (c) and (d) and Coastal Beaches at 310 CMR 10.27 (3).

40. The proposed revetments would have an adverse effect on the adjacent and downdrift coastal beaches and dunes for the reasons given in the following paragraphs.

41. The proposed revetments would change the beach from a dissipative one to a reflective one leading to increased beach scour. Sediment transport due to wave reflection is a commonly cited process in the interaction between beaches and

revetments. Reflection from revetments increases the applied energy to the sedimentary bed leading to increased scour in front of the wall and some distance downcoast. This occurs because both incoming waves and those waves reflected from the revetment apply their erosive energies to the beach. In this way revetments accelerate the transport of sediment in front and downdrift of the revetment.

42. Revetments also have adverse impacts on adjacent beaches and/or dunes. This phenomena is often referred to as flanking or end scour. This is a well documented problem and is defined as the excess erosion which the presence of the structure causes to occur beyond the naturally occurring erosion. This excessive erosion leads to acceleration of the loss of beach in front of neighboring properties. It is this problem that forces neighboring property owners to erect revetments and leads to the proliferation of walls.

43. The proposed revetments will impound sediment behind them thereby removing a source of sediment which would otherwise be available to provide storm damage protection to downdrift properties. This sediment would be significant (i.e. would play a role) to the protection of the storm damage prevention interest of the Act. The loss of these sediment sources are particularlysignificant if revetments are allowed to be constructed with gaps (non-contiguous).

Conclusions

44. Based upon the preceding, I conclude that the construction of the proposed revetments within a Coastal Dune and in the buffer zone to a Coastal beach would adversely effect the statutory interests of storm damage prevention and flood control in that:

a. The proposed revetments would enhance scour by reflecting wave energy thereby leading to the narrowing and lowering of the coastal beach and enhancing erosion of the abutting and downdrift coastal dunes, impacts expressly prohibited by the performance standards for Coastal Beaches at 310 CMR 10.27 (3) and Coastal Dunes at 310 CMR 10.28 (3) (a), (c) and (d).

b. The proposed revetments would enhance erosion of the downdrift beaches and dunes through reflection of wave energy inducing end scour. This impact is prohibited by the performance standards for Coastal Beaches at 310 CMR 10.27 (3) and Coastal Dunes at 310 CMR 10.28 (3) (a), (c) and (d).

c. The proposed revetments would impound sediment behind them and would therefore deprive sediment for the downdrift coastal resources. This impact is prohibited by the performance standards for Coastal Beaches at 310 CMR 10.27 (3) and Coastal Dunes at 310 CMR 10.28 (3) (a), (c) and (d).

d. The proposed revetments would not comply with terms of a Wetland Restriction Order which was recorded at the Registry of Deeds against the subject properties pursuant to M.G.L., Chapter 130, Section 105. The proposed revetments would obstruct the movement of sediment and would adversely affect adjacent properties and downcoast areas. These impacts are expressly prohibited under the terms of the Wetland Restriction Order at 3 (G) and 4 (E).

45. There are alternative means of protecting the Applicants' properties and the entire Little Beach area for that matter in a more comprehensive manner that would not result

in adverse impacts to abutting and downdrift property owners. Personnel from the Department and the Massachusetts Office of Coastal Zone Management (CZM) have worked extensively with the Town of Chatham and Aubrey Consulting, Inc., to formulate a comprehensive plan for the protection of the Little Beach area while preserving the natural resources to the maximum extent possible. Following is a description of the Department's involvement in the development of the EIR for this area.

(a) On February 1, 1988, November 7, 1989 and April 7, 1992, in conjunction with the applicants' request for Superseding Orders of Conditions, I visited the area where the applicant's properties are located.

(b) On May 11, 1992, the Department issued an Emergency Certification to Alfred Nelson permitting the construction of a temporary sand bag structure to abate the threat of erosion until a comprehensive long-term solution could be developed by the Nelsons. Said sand bag structure consists of PVC-coated polyester dura bags that fill with sand and are about 20 feet long. The applicant constructed a dura bag wall which provides considerable protection for his home. Prior to this Certification, the applicants agreed to participate with the Town of Chatham and others in the preparation of an Environmental Impact Report that evaluates the impacts of various measures on the entire area affected by the 1987 breach. An Environmental Impact Report is needed to analyze the potential impact that coastal erosion controls at one location may have on adjacent or downcoast areas. A system-wide approach to the coastal erosion problems along the inner-shore of

Chatham Harbor is necessary due to the unusual and dynamic nature of the Nauset breach cycle and its resulting erosion patterns.

(c) On or about September 27, 1993, I began to review portions of a working draft EIR (WDEIR). The purpose of my review was to prepare comments on the proposals in the WDEIR, and to expedite completing a Final Environmental Impact Report.

(d) On October 13, 1993, I met with Dave Aubrey, Lee Weisher, and John Ramsey of Aubrey Consulting, Inc., personnel from the Massachusetts Office of Coastal Zone Management, personnel from the MEPA Office, personnel from the Cape Cod Commission, andrepresentatives from the Town of Chatham to discuss the contents of the draft EIR for the Little Beach area of Chatham. The purpose of this meeting was to facilitate the preparation of the EIR by ensuring that all alternatives to shoreline armoring are given proper consideration and that appropriate mitigating measures are incorporated into the recommended plan.

(e) On October 21, 1993, I accompanied personnel from Aubrey Consulting, Inc., personnel from the Cape Cod Commission staff, and Jim O'Connell from the Massachusetts Office of Coastal Zone Management (CZM) on a site visit. The purpose of this site visit was to provide technical feed-back on resource area delineations and to facilitate the preparation of the EIR.

(f) On October 29, 1993, I submitted comments on the WDEIR to Aubrey Consulting, Inc.

(g) On January 28, 1994, I submitted comments on the DEIR to Aubrey Consulting, Inc.

46. The DEIR prepared by ACI evaluated various shoreline protection alternatives, including both "hard" and "soft" engineering solutions, for the Little Beach area. The most effective alternatives were found to be revetments, groins/jetties, raising the houses, and beach nourishment. The two primary alternatives that will protect the landform while slowing the longshore transport of sand are revetments and groins/jetties. Properly designed and constructed revetments should prevent the erosion of the landform and therefore will result in sedimentdeprivation for areas downdrift of the revetments. However, in the Little Beach area the primary long-term source of sediment for the beaches and dunes will be from the breakup and shoreward migration of South Beach. Nevertheless, downdrift monitoring of the beach profile should be done and mitigation in the form of beach nourishment should be conducted if needed.

47. The recommended plan put forth by ACI in the DEIR proposes that a continuous revetment be initially constructed as far landward as possible, and extending from the Nelson property on the north to the Hicks property on the south. Constructing the revetment as far landward as possible will maximize the natural protective attributes of the beach/dune system. Erosion will progress from north to south once the barrier spit begins to break- up and migrate southward and westward. A continuous revetment will prevent the end scour and flanking problem associated with revetments. The DEIR stresses the importance that the proposed revetment be constructed as a contiguous structure. Discontinuous sections of revetment would result in potentially severe impacts on adjacent properties and a gap in the revetment would compromise the integrity of the entire structure. The

recommended plan also proposes that a series of temporary wood or steel sheet pile groins be constructed to slow the loss of fronting beach. The groins would be filled with sediment to entrapment capacity after construction. Maintaining the groins filled to entrapment capacity will ensure that sediment transported alongshore by-passes thegroins thereby preventing any interference with alongshore sediment transport. In order to keep the groins filled to entrapment capacity as the shoreline retreats they should either be shortened and removed in sections or artificially filled with sand.

48. The recommended revetment must be constructed as a contiguous structure in order to maintain its structural integrity. The DEIR states that a gap in the revetment would compromise the integrity of the entire revetment. This would occur because a discontinuous revetment would be flanked at its ends and the supporting material would erode leading to the collapse or failure of the revetment. The probability of structural failure for a discontinuous revetment is high due to the unconsolidated nature of the landform (dune deposits), the low elevation of the sites, and the intense coastal processes expected in this area in the future.

49. The recommended plan is intended to slow the expected erosion but is not intended to provide protection from flooding. The Little Beach area is low in elevation and floods from more than one direction. Flood protection can only be achieved by raising structures and by taking other flood-proofing measures.

50. The ACI recommended revetment would be constructed as a contiguous structure and would be located almost entirely landward of the coastal dune delineated under the Wetlands Restriction Order. The ACI recommended plan is designed to prevent adverseimpacts to adjacent or downdrift properties and

therefore would comply with the terms of the Wetland Restriction Order.

51. As substantiated in the EIR, the ACI recommended plan will cause negligible long-term impacts. This is in large part related to the unique nature of the 150 year erosion cycle in Chatham. The cycle of the Nauset barrier beach system indicates that the Applicants' properties will eventually receive protection due to southward moving littoral drift causing North Beach to migrate southward over time. As a result of this littoral drift, the focus of coastal erosion will begin to shift south of the Applicant's properties. At that time the Little Beach area will no longer be subject to direct wave attack from the Atlantic Ocean and therefore the presence of the revetments will pose no environmental threat. Further, at that time the groins should be removed since they will no longer be needed and the beaches should be restored either through natural processes or through an on-going condition in the Order of Conditions that requires beach restoration (nourishment).

52. In order to implement the ACI recommended plan and to ensure that appropriate actions and mitigation are effectuated, I would recommend that a single entity, possibly the Town of Chatham, file a Notice of Intent for the entire project. This would ensure that the recommended revetment be constructed in a continuous manner (without gaps) and that mitigation would be coordinated throughout the lifetime of the project.

Signed under the pains and penalties of perjury.

James Mahala

Date : _____

EXHIBIT 2

COMMONWEALTH OF MASSACHUSETTS

APPEALS COURT

NO. 92-P-827

ALFRED NELSON, ET AL.,

Plaintiffs - Appellants,

v.

COMMONWEALTH OF MASSACHUSETTS, ET AL.,

Defendants - Appellees

AFFIDAVIT OF MARY F. CONNOLLY

I, Mary F. Connolly, do hereby state and depose of my personal knowledge as follows:

1. I am a paralegal in the Environmental Protection Division of the Office of the Attorney General.

2. I accompanied Assistant Attorney General Madelyn Morris and was present for the September 20, 1993 hearing on plaintiffs' appeal of the Superior Court Order dismissing the plaintiffs' regulatory taking claim and upholding the Wetlands Regulations.

3. At the hearing, I heard Assistant Attorney General Morris state that the plaintiffs' had not applied for a variance to build a seawall, even though the Department of Environmental Protection eliminated the $4,000 fee for requesting a variance.

5. At the hearing, Assistant Attorney General Morris estimated that DEP could review the request for a variance in about thirty days.

6. At that point, the Court urged Assistant Attorney General Morris to have DEP respond promptly to plaintiffs' request for a variance after the receipt of plaintiffs' application. The Court further indicated that it would not look favorably upon delay by DEP in responding to the variance request.

7. I did not hear the Court issue an order of any kind during the hearing on September 20, 1993.

SIGNED THIS 1ST DAY OF NOVEMBER 1993 UNDER THE PAINS AND PENALTIES OF PERJURY.

Mary F. Connolly

Supreme Court, U.S.
FILED
SEP 12 1994
OFFICE OF THE CLERK

(3)

No. 94-143

In The

Supreme Court of the United States

October Term, 1994

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III, AND BERNICE HICKS,

Petitioners,

v.

COMMONWEALTH OF MASSACHUSETTS AND
TOWN OF CHATHAM, INTERVENOR,

Respondents.

Petition For A Writ Of Certiorari
To The Supreme Judicial Court
For The Commonwealth Of Massachusetts

PETITIONERS' REPLY BRIEF

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NEW MATERIAL IN CONTROVERSY

The following new issues are raised in Respondents' brief:

1) A Final Decision is imminent in the administrative proceeding.

2) Respondents favor a seawall for Petitioners.

3) Petitioners could have filed an EIR for their seawalls.

4) Petitioners' houses are safe.

5) Petitioners only challenged facial validity of the regulations.

6) Petitioners did not apply for a variance until September of 1993.

The following additional facts are introduced in this brief by Petitioners:

The Scientist who provided the science for the regulation protested the regulatory distinction between dune and bank and says that seawalls on coastal bank are likely to harm properties on dune without seawalls.

There are no known studies of the impact of respondents' seawall regulation on the coast. Respondents have not updated the science underlying their regulation since 1978.

Testimony by the Petitioners as to their legal and expert fees to date, including costs of administrative remedies.

A showing of discrimination against nonresidents of Chatham offered as part of Variance Application of September 1993.

1) *A Final Decision is imminent* (Res. 13, footnote 14). A Final Decision (App. 69) is an intermediate step on the way to a "Final Order" (App. 73). Respondents have promised a Final Decision (Res. App. 43) by October, not a Final Order.

Petitioners have spent over $330,000 on legal and expert fees since 1991. Sixty thousand dollars of this was in preparation for the Administrative hearing (App. 64).

Petitioners have spent $140,000 on substandard flood control ordered by the Respondents and suffered $100,000 in flood damages since 1991 (Pet. 9).

Respondents can delay forever by perpetually demanding more information. At $75,000 a year in administrative and flood control costs, Petitioners' endurance is limited.

2) *Respondents favor a seawall for Petitioners.* Respondents' seawall plan (Res. App. 28) (actual plan at App. 95) was not drawn by an engineer, is substandard and would require the voluntary cooperation of seven families to build.

There is no way to compel group participation and some of the families are reluctant to build a seawall they do not presently need.

Respondents say a seawall with an average elevation of 12 feet above and 1 foot below mean low water will protect Petitioners.

The Department of Waterways specifies an elevation of 20 feet above and 8 feet below mean low water (App. 88) for Chatham.

Seawalls built since 1987 to lesser specifications are now failing (App. 91).

Respondents' seawall is a ruse to avoid outright permit denial. It is as expensive and ineffective as the other flood control methods forced on Petitioners (supra).

3) *Petitioners could have filed an EIR for their seawalls* (Res. 4 and 6).

The EIR had to include a discussion of the impact of each of the thirty-four or more seawalls built or planned over a 2.5 mile stretch of coast (Pet. App. 151).

4) *Petitioners' houses are safe* (Res. 16, footnote 16). Past experience shows this is unlikely (Pet. App. 39). Such safety as exists has cost $240,000 since 1991 (supra).

5) *Petitioners only challenged facial validity of the regulations* (Res. 18).

Petitioners filed a brief on coastal science with over 300 pages of appendix. Respondents replied with four affidavits by coastal experts. The issue was coastal science.

Petitioners argued that Respondents made unexplained exceptions to their seawall ban which were either destroying Petitioners' properties (Pet. 12) or showed that the ban was unjustified (Pet. 14).

Respondents convinced the lower courts that the distinction between coastal dune and coastal bank justified the exceptions.

Lower Court decisions might have been different had Respondents complied with discovery requests and revealed that their own scientists told them that an exception based on dune and bank was unjustified (App. 27)

and that seawalls on coastal bank are likely to deny sand to properties downstream (App. 58).

Respondents still treat the loss of all sand to deep water as debatable (Res. App. 23), despite protests (App. 29) and the testimony of their own expert (App. 59).

The premise that beaches and dunes control erosion is unsupportable because dunes and beaches lose all of their sand to deepwater and require ongoing erosion of the coast just to exist (Pet. 11).

Seawalls hold sand onshore, thus preserving a non-renewable natural resource.

Respondents intend that such segments of the Massachusetts coast as they chose shall be returned to a state of nature (Pet. App. 188).

People who are favored by Respondents get seawall permits (App. 4).

Respondents discriminate against nonresidents in seawall permitting (App. 5).

6) *Petitioners did not apply for a variance until September of 1993* (Res. 4 footnote 7). This is misleading (App. 77, 80 and 83). Moreover, Respondents' suggestion that the September application lacked required information (Res. App. 39) is inaccurate (requirements at App. 12 and 13, application at App. 1).

Respondents have not studied the impact of their regulation on the coast (App. 57), have not updated their science (App. 98), have illegally forbidden study of the twenty-nine seawalls they have allowed in Chatham (Pet.

14) and continue to suppress information with which they do not agree (supra).

Respondents' regulation is a psuedo-scientific sham. Respondents' remedies are inexhaustible. Petitioners' resources are not. Respondents intend to destroy Petitioners by delay.

NICHOLAS B. SOUTTER
Counsel of Record
with PAUL S. MCGOVERN
Attorneys for Petitioners
One Washington Street
Suite 208
Wellesley, MA 02181
(617) 237-6300

APPENDIX

TABLE OF CONTENTS

Page

Variance Request, Nelson and Hicks, dated September 20, 1993 .....App. 1

Deposition of Graham Sherwood Giese, pages 1 and 2, 32 - 34, dated July 12, 1994.....App. 25

Correspondence from Nicholas B. Soutter to M. Kathryn Sedor, RE: Misstatements of Fact, dated August 17, 1994 .....App. 29

Testimony presented to the Department of Environmental Quality Engineering, pages 1 - 3, dated June 9, 1978 .....App. 50

Deposition of Graham Sherwood Giese, pages 1, 2, and 15 - 24, dated July 12, 1994 .....App. 53

Affidavit of Evelyn and Alfred Nelson, RE: Legal Expenses, dated August, 1994.....App. 62

310 Code of Massachusetts Regulations, excerpts from Sections 1.00 and 10.00.....App. 67

Correspondence from Nicholas B. Soutter to Department of Environmental Protection, RE: Nelson Variance Request, dated February 7, 1992 .....App. 76

Correspondence from Nicholas B. Soutter to Department of Environmental Protection, RE: Nelson Protest of $4,000 Fee and Notice of Eligibility for Variance, dated February 14, 1992..App. 80

Correspondence from Nicholas B. Soutter to Department of Environmental Protection, RE: Hicks Protest of $4,000 Fee and Notice of Eligibility for Variance, dated July 8, 1992.....App. 82

APPENDIX

TABLE OF CONTENTS – Continued

Page

Correspondence and Waterways Specifications Seawall Plan from Robert E. Weaver to Judy Perry, dated March 10, 1988 .....App. 86

Phase I Draft Environmental Impact Report, cover and pages 55 and 60, dated January, 1993....App. 89

Phase II Final Environmental Impact Report, cover and pages 7 and 46, dated May, 1994..App. 94

Respondents Answers to Interrogatories, dated December 20, 1991, *Nelson v. Commonwealth*, Case No. 90-1712.....App. 98

APPENDIX 1

September 20, 1993

Commissioner Daniel S. Greenbaum
Department of Environmental Protecton [sic]
One Winter Street
Boston, MA 02108
Phone: 292-5500

RE: Evelyn and Alfred Nelson
27 Morris Island Road, Chatham
File: SE 10-987

Lewis & Bernice Hicks
40 Dune Drive, Chatham
File: SE 10-1027

Deal Commissioner:

Request is hereby made for a variance from 310 C.M.R. 10:27 and related sections so as to permit construction of rock seawalls on the above-captioned properties in accordance with the specifications enclosed herewith (Ex.1).

These walls comply with the same specifications ordered for the 29 seawalls that have been allowed to petitioner's north since 1987, including the seawall used to protect the tennis court that immediately abuts the Nelson property.

As grounds for this request petitioners say:

1) Their properties were flooded in the October 30, 1991 northeast storm by 5 feet of water in their cellars.

2) Alternative measures:

a) Beach nourishment was tried by the Nelsons. It cost $21,000 to cover 100 feet and lasted 6 months.

The Corps of Engineers estimated that to cover a 1,300 foot segment in the same area would require $350,000 for 1 year with refills costing $175,000.

These numbers suggest that a year of beach nourishment will cost 200 to 270 dollars per foot and 100 to 130 dollars per foot thereafter.

Within 8 years nourishment will have cost as much as the proposed seawall.

Over the last 20 years The Corps of Engineers has spent 8 billion dollars trying to nourish 400 miles of United States beaches. Twenty-six percent of these projects have failed within 5 years. The per foot cost, using the Nelson's cost of sand, is over $5,000 per foot.

The Corps rejected beach nourishment as impracticable at Chatham. The Department characterized it as stop gap and expensive. It did not protect Mr. Nelson's house in the storm described in paragraph one.

b) The manufacturer of sandbags and sand tubes recommend that they not be used in wave tide environments exceeding 5 feet.

The Department of Waterways uses a design wave tide height of more than twice that for Chatham.

Sandbags cost $700 a foot to build and have an expected life of 1 to 3 years in Chatham (Mr. Nelson has sandbags).

c) Stilting or moving. There is no likelihood that the houses could be moved back or stilted so as to avoid

flooding. The area where Nelson and Hicks are located flooded to a depth of 300 feet in the last century when sea levels were lower.

4) Mitigating measures. We will comply with the same measures ordered for other seawall owners in Chatham.

5) There is an overriding public interest in allowing this variance because:

a) Twenty-nine other seawalls have been allowed in the 1 mile due north of Nelson and Hicks. Under the regulation these seawalls are presumed to cause erosion of the Nelson and Hicks properties.

b) Many of these walls were built with a waiver of the regulatory requirement that there be no "natural hill, mound or ridge of dune sand" on a property.

c) Mr. Nelson advanced the entire homeowners' share of the cost of an Environmental Impact Report in June of 1992.

This report was to cover the area from the Fish Pier to Morris Island and was to detail the environmental and adverse impacts of every seawall in place or proposed.

After Mr. Nelson's money had been received, discussion of the environmental and adverse impacts of the 29 seawalls was forbidden.

This order was illegal under the enabling legislation (Ex.2) but has been implemented. The EIR does not contain this information.

Neither Nelson or Hicks has any way to establish the environmental or adverse impact of these seawalls on their properties, making it impossible to argue the issue at a Departmental appeals hearing.

d) The EIR was broken into 2 phases. This was inconsistent with the original order and is forbidden by the regulations.

e) Messrs. Nelson and Hicks are in the Phase 2 area. They are required to discuss the environmental and adverse impacts of their proposed seawalls as is every Phase 2 owner.

f) It has now been 15 months since Mr. Nelson advanced the money needed for the EIR. Phase I is tentatively complete. There is no preliminary draft for Phase 2.

g) Seawalls on Nelson and Hicks would help protect Morris Island Road and Dune Drive.

h) Mr. Nelson has waited 4 years for a hearing on one appeal. Both Mr. Nelson and Mr. Hicks took appeals and requested variances in 1992. They were told that they would have to pay a fee of $4,000 each. Both declined to pay this fee but made it clear that they were pursuing the takings issue (Ex.3).

6) Takings claims and related litigation:

a) None of the 20 Chatham residents who have applied for seawalls has been denied. Seawalls have been allowed for residents' golf courses, tennis courts and parking lots.

b) Nine out of 21 nonresidents of Chatham who have applied for seawalls actually have them. Six others have lost their houses either because they were denied permits or the permit conditions added 40% to the cost of the seawall. These conditions were waived for residents.

c) Ten nonresidents have taken appeals, all commenced in 1988 and 1989. None has ever been given a hearing. Eight of these appeals are pending. Two of these appeals have been dismissed because the houses were destroyed.

d) The Department has refused to give appeals hearings to nonresidents because there is no EIR. It has permitted 29 seawalls without an EIR in the same time period. No resident in the EIR area has ever been denied a seawall or had to take an appeal.

e) The Department has ignored letters sent to it about this issue and has now been sued for discrimination by Nelson and Hicks.

f) Nelson and Hicks have also sued for an unconstitutional taking.

7) Likelihood of loss:

a) At present it is estimated that one storm will destroy the beach in front of Nelson and the next storm will cause the sandbags to fail. The third storm will flood or destroy the house. Hicks has more sand but no sandbags and the time table to destruction is the same.

b) Chatham has an average of 2 major storms a year. The life expectancy of these houses is 3 months to 3 years.

My Clients have no interest in pursuing litigation. They want the same seawalls already granted without an EIR and with a waiver of the dune definition already given their neighbors.

This is a fair and reasonable end to a problem that has vexed us all for 4 years.

Please grant their request.

Sincerely,

/s/ Nicholas B. Soutter
Nicholas B. Soutter

CERTIFICATE OF SERVICE

This is to certify that a true copy of the variance request and exhibits filed herewith has been served on the following individuals and entities on September 21, 1993:

Service in hand on:

Daniel S. Greenbaum
Department of Environmental Protection
One Winter Street
Boston, MA 02108

Madelyn Morris, Esq.
Assistant Attorney General
One Ashburton Place
Boston, MA 021089

Service by Federal Express on:

Bruce P. Gilmore, Esq.
1095 Route 6A
PO Box 714
W. Barnstable, MA 02668

Margaret Finn
DEP – DWW 8th Floor
One Winter Street
Boston, MA 02108

Jim O'Connell
Coastal Zone Management
100 Cambridge Street
Boston, MA 02202

MEPA
100 Cambridge Street
Boston, MA 02202

Elizabeth Kouloheras
DEP – Lakeville
Route 105
Lakeville, MA 02347

Chatham Conservation Commission
549 Main Street
Chatham, MA 02633

Alfred and Evelyn Nelson
27 Morris Island Road
Chatham, MA 02633

Lewis and Bernice Hicks
40 Dune Drive
Chatham, MA 02633

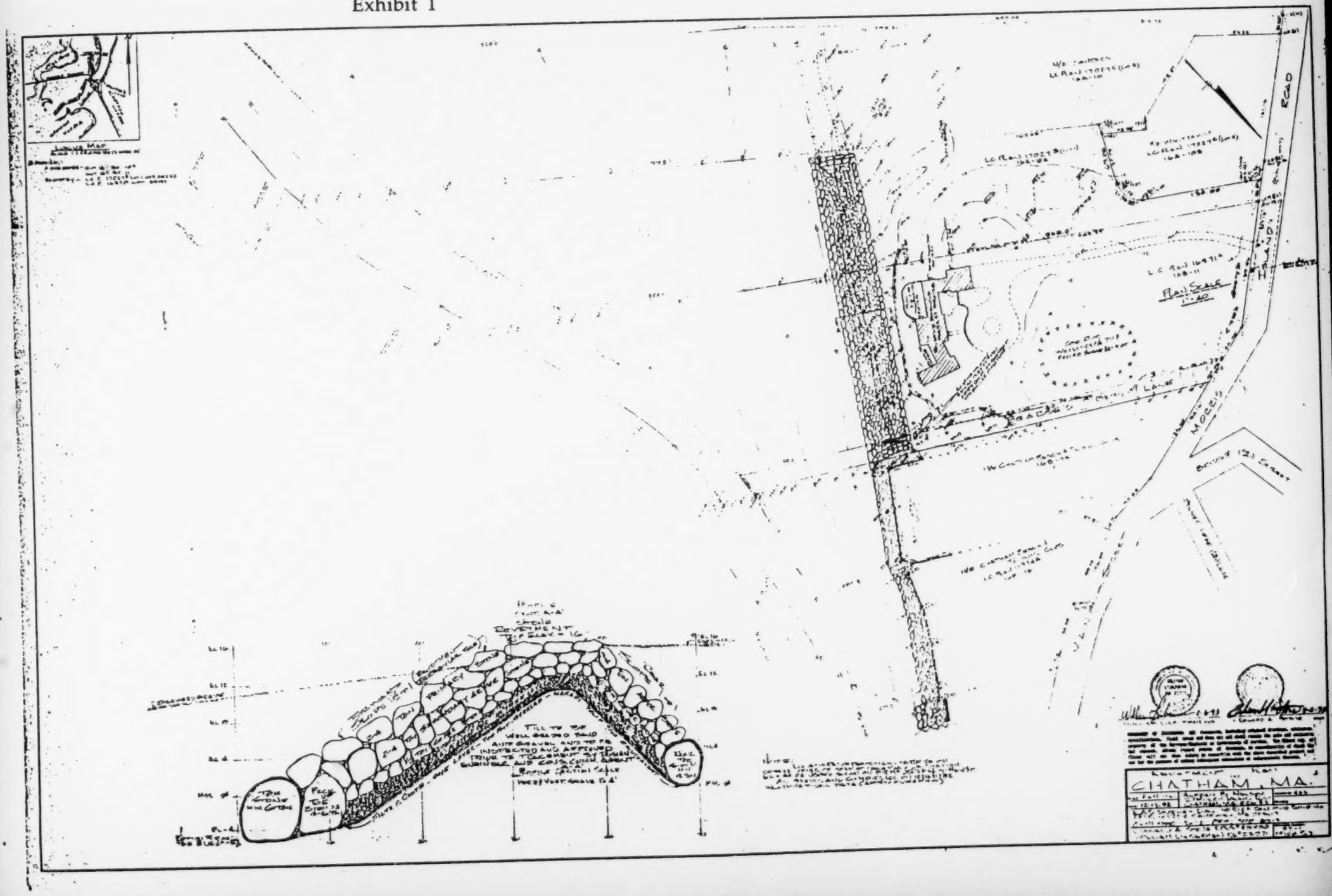
Coastal Engineering Co., Inc.
260 Cranberry Highway
Orleans, MA 02653

Carl Dierker, Esq.
DEP
One Winter Street
Boston, MA 02108

September 21, 1993

/s/ Paul S. McGovern
Paul S. McGovern

Exhibit 1



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App. 10

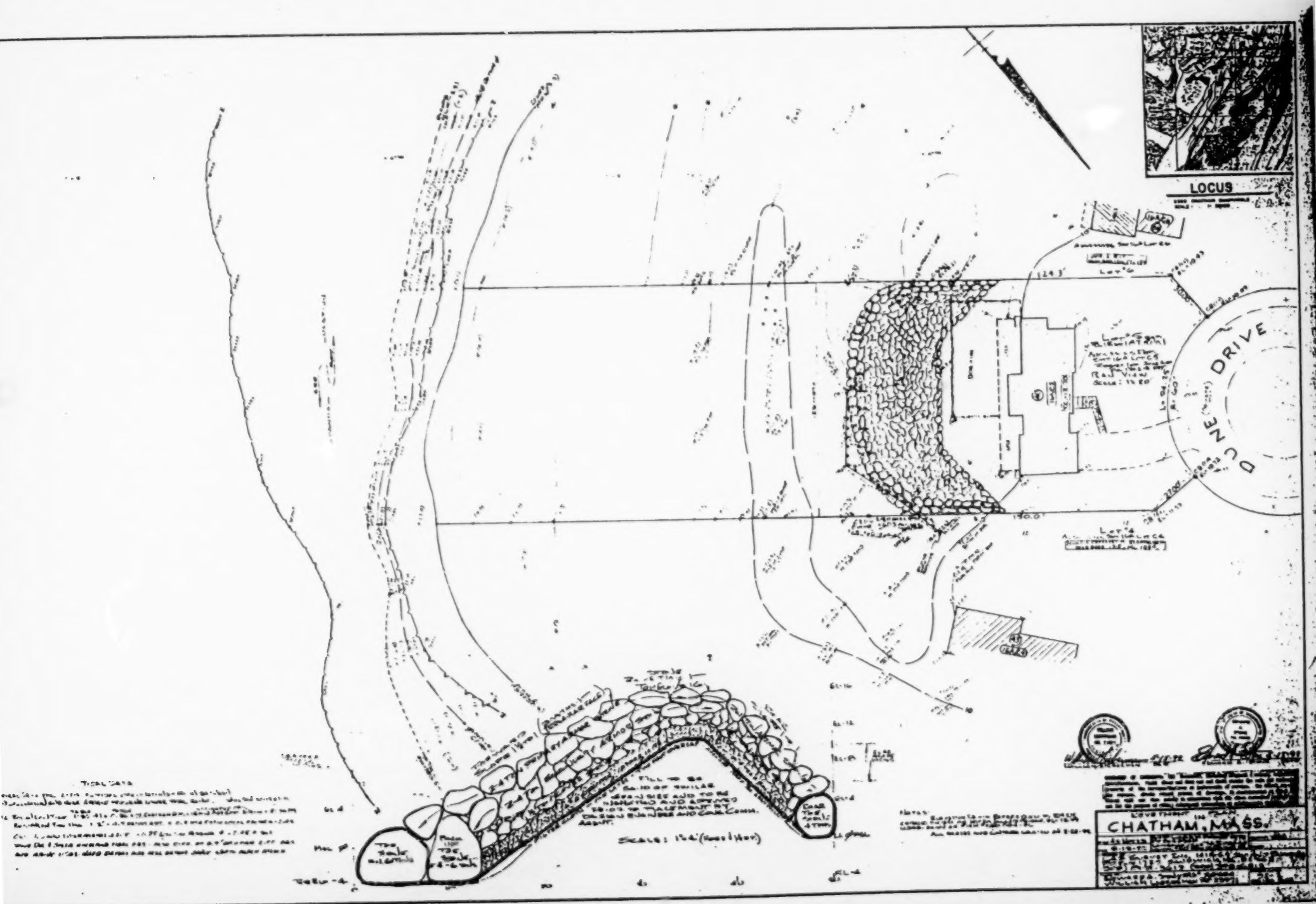

Exhibit 2

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

* * *

10.35: continued

(2) *Definitions.*
(a) *Anadromous Fish* means fish that enter fresh water from the ocean to spawn, such as alewives, shad and salmon.
(b) *Catadromous Fish* means fish that enter salt water from fresh water to spawn, such as eels.
(c) *Anadromous/Catadromous Fish Run* means that area within estuaries, ponds, streams, creeks, rivers, lakes or coastal waters, which is a spawning or feeding ground or passageway for anadromous or catadromous fish and which is identified by DMF or has been mapped on the Coastal Atlas of the Coastal Zone Management Program. Such fish runs shall include those areas which have historically served as fish runs and are either being restored or are planned to be restored at the time the Notice of Intent is filed. For the purposes of these regulations, such fish runs shall extend inland no further than the inland boundary of the coastal zone.

WHEN SUCH LAND OR BANK IS DETERMINED TO BE SIGNIFICANT TO THE PROTECTION OF MARINE FISHERIES, THE FOLLOWING REGULATIONS SHALL APPLY:

(3) Any project on such land or bank shall not have an adverse effect on the anadromous or catadromous fish run by:

(a) impeding or obstructing the migration of the fish, unless DMF has determined that such impeding or obstructing is acceptable, pursuant to its authority under M.G.L. c. 130.s. 19;

(b) changing the volume or rate of flow of water within the fish run; or
(c) impairing the capacity of spawning or nursery habitats necessary to sustain the various life stages of the fish.

(4) Unless otherwise allowed by DMF pursuant to M.G.L. c. 130. s. 19, dredging, disposal of dredged material or filling in a fish run shall be prohibited between March 15th and June 15th in any year.

(5) Notwithstanding the provisions of 310 CMR 10.35(3), no project may be permitted which will have any adverse effect on specified habit at sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.36: Variance

The Commissioner may waive the application of any regulation(s) in Part II of 310 CMR 10.00 when he finds, after opportunity for an adjudicatory hearing, that:

(1) there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with the regulation(s);

(2) that mitigating measures are proposed that will allow the project to be conditioned so as to contribute to the protection of the interests identified in the Act; and

(3) that the variance is necessary to accommodate an overriding community, regional, state or national public interest; or that it is necessary to avoid an Order that so restricts the use of property as to constitute an unconstitutional taking without compensation.

Procedure.

A request for a variance shall be made in writing and shall include, at a minimum, the following information:

(a) a description of alternatives explored that would allow the project to proceed in compliance with the regulation(s) and an explanation of why each is unreasonable;
(b) a description of the mitigating measures to be used to contribute to the protection of the interests identified in the Act; and
(c) evidence that an overriding public interest is associated with the project which justifies waiver of the regulation(s), or evidence that the Superseding Order so restricts the use of the land that it constitutes an unconstitutional taking without compensation.

The request for a variance shall be sent to the Department by certified mail or hand delivered and a copy thereof shall at the same time be sent by certified mail or hand delivered to the conservation commission and any other parties.

After reviewing the information submitted with the request for a variance and any other information submitted by any party within twenty-one (21) days of the request, the Commissioner shall issue a decision as to whether to grant the request.

Within ten (10) days of the date of issuance of the Commissioner's decision on the variance, any person specified in 310 CMR 10.05(7)(j) may, according to the procedures specified in that section, request an adjudicatory hearing on the decision. At the adjudicatory hearing, the applicant has the burden of demonstrating that the

project meets the criteria necessary for a variance. Other parties to the adjudicatory hearing may introduce evidence either in favor of or opposing the request for a variance.

For projects in which all of the proposed work will be undertaken on land within the boundaries of one city or town, the request for a variance shall not be filed until the applicant first files a Notice of Intent with the Conservation Commission. The Commission shall review the project in accordance with the procedures set forth in Part I of 310 CMR 10.00 and issue an Order of Conditions consistent with Part II of 310 CMR 10.00. Within ten (10) days of the issuance of the Order of Conditions, the applicant may request the Department to issue a Superseding Order. The Department staff shall review the project in accordance with the procedures set forth in Part I of 310 CMR 10.00 and shall issue a Superseding Order consistent with the provisions of Part II of 310 CMR 10.00. Within ten (10) days of the issuance of the Superseding Order, the applicant may request an adjudicatory hearing on that order and/or a variance under 310 CMR 10.36 according to the procedure previously described.

For projects in which the proposed work will be undertaken on land within the boundaries of more than one city or town, the applicant may file a request for a variance directly with the Commissioner, with a copy to each affected conservation commission. If, after public notice, the Commissioner finds that a project meets the variance criteria, he shall specify which regulation(s) has been waived and what general requirements or conditions must be met to satisfy the above-stated variance criteria. The applicant shall then file a Notice of Intent

with the appropriate conservation commissions in accordance with the procedures contained in Part I of 310 CMR 10.00. The conservation commissions shall issue Orders of Conditions consistent with all provisions of Part II of 310 CMR 10.00 except those waived by the Commissioner and containing any additional conditions or requirements imposed by the Commissioner in the variance. The usual procedures contained in Part I of 310 CMR 10.00 for requesting Superseding Orders and adjudicatory hearings remain applicable.

Commentary

310 CMR 10.36, which provides that the Commissioner may waive the application of one or more of the regulations on the basis of overriding public benefit is intended to be employed only in rare and unusual cases. The provision authorizing a variance request directly to the Commissioner for projects on land within more than one city or town is intended to apply to projects that involve functionally related work in several contiguous towns (e.g., transportation and energy transmission facilities) and to provide for a single uniform determination concerning alternative locations and the other variance criteria.

10.37: Rare Species

Ninety (90) days or less prior to the filing of a Notice of Intent, the applicant shall notify the Massachusetts Natural Heritage and Endangered Species Program (hereinafter referred to as the Program) certified mail or hand

delivery (so that the Program will have received such notification prior to the filing of the

* * *

Exhibit 3

NICHOLAS B. SOUTTER
ATTORNEY AT LAW
ONE WASHINGTON STREET
WELLESLEY, MASSACHUSETTS 02181

617-237-6300

617-237-6360

NICHOLAS B. SOUTTER
PAUL S. MCGOVERN

AVOCAT
RECHTSANWALT
ABOGADO
ADVOGADO
ADBOKAT

February 7, 1992

BY HAND AND CERTIFIED MAIL

Wetland Protection Division
South East Regional Office
Department of Environmental Protection
Lakeville Hospital
Main Street
Lakeville, MA 02347

RE: Alfred B. Nelson, 27 Morris Island Road, Chatham, MA, File No. SE-10-987

Dear Sir or Madam:

The above-captioned petitioner hereby requests that the Department of Environmental Protection issue a Superceding Order to allow the above-captioned project.

The petitioner's situation is an emergency. His Chatham Harbor home is exposed to the direct force of storm-driven ocean waves. Further storm activity will destroy the home at any time.

Chatham Conservation Commission's denial of said project (Order of Conditions issued January 30, 1992) is inconsistent with the stated purpose of the Wetlands Protection Act (G.L. c. 131, sec. 40) and with provisions of 310 CMR 10.00 et seq. for reasons including but not limited to:

1. Proposed construction would take place in an area that is not significant to storm damage and flood control.

Chatham Harbor has experienced severe erosion since the 1987 breakthrough of the Chatham barrier beach. The erosion is caused by ocean waves. It is not controlled or mitigated by sediment located at or eroded from any Chatham Harbor property. Sediment eroded from the petitioner's property plays no role in flood-protecting outlying areas.

2. The project meets all applicable performance standards and would have no impact on outlying areas.

Sixty percent of the Chatham Harbor area is protected by DEP-approved seawalls. The petitioner requests a seawall of the approved design. Generally accepted scientific knowledge and experience at Chatham show that this design does not cause or accelerate erosion in outlying areas.

The petitioner requests a variance pursuant to 310 CMR 10.36:

1. The proposed project is the only reasonable alternative for the protection of interests identified by the Act (supra) including storm damage prevention and flood control.

In October, 1991, petitioner's property was exposed to storm-driven waves generating 35,000 foot pounts [sic] of force. Petitioner's DEP-approved sand nourishment project failed. Only the requested seawall can protect petitioner's property from this onslaught.

2. The proposed project includes mitigating measures that protect the interests of the Act.

The nature of coastal erosion in general and at Chatham, the manner in which seawalls commonly function, and the specific project design ensure that the proposed seawall will have no adverse impact on outlying areas.

3. A variance will further community interests and will prevent the further taking of the petitioner's property.

The project will protect low-lying, inland areas and public ways from destruction. All seawalls built in Chatham since 1987 have proven successful. All other attempts at flood control have failed.

Petitioner's project should be allowed as the wetland regulations (supra) upon which the Chatham Conservation Commission's based its denial of petitioner's proposal are unscientific, irrational, and unsuited to mandated legislative purpose. The regulations condemn petitioner's property to destruction without compensating public benefit.

Further grounds for petitioner's request are provided in memos, maps, affidavits, and technical article enclosed.

This request has been sent, certified mail, to the petitioner and the Chatham Conservation Commission.

The petitioner reserves the right to update and amend this request with appropriate notice.

Sincerely,

/s/ Nicholas B. Soutter

NBS/mps
Enclosures

cc. Chatham Conservation Commission
Madelyn Morris, Esq.
Bruce P. Gilmore, Esq.
Alfred Nelson
Louis Hicks

NICHOLAS B. SOUTTER
ATTORNEY AT LAW
ONE WASHINGTON STREET
WELLESLEY, MASSACHUSETTS 02181

617-237-6300

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NICHOLS B. SOUTTER
PAUL S. MCGOVERN

AVOCAT
RECHTSANWALT
ABOGADO
ADVOGADO
ADBOKAT

July 8, 1992

CERTIFIED MAIL

Wetlands Protection Division
South East Regional Office
Department of Environmental Protection
Lakeville Hospital
Main Street
Lakeville, MA 02347

RE: Lewis W. Hicks, III, 40 Dune Drive, Chatham, MA
File No. Se-101027

Dear Sir or Madam:

Enclosed please find a check in the amount of $50.00. Petitioner Lewis W. Hicks, III hereby requests that the Department of Environmental Protection issue a Superceding Order to allow the above-captioned seawall project. The project was denied by the Chatham Conservation Commission on July 2, 1992.

Petitioner's situation is an emergency. His Chatham-harbor home is exposed to the direct force of storm-

driven ocean waves. Further storm activity will destroy the home at any time.

Chatham Conseravation [sic] Commission's project denial is inconsistent with wetlands legislation (G.L. c. 131, sec. 40 and G.L. c. 130, sec. 105) and regulations (310 CMR 10.00 et seq.) for reasons including but not limited to:

1) The proposed construction would take place in an area that is not significant to storm damage and flood control. Chatham Harbor has experienced severe flooding that is not controlled or mitigated by sediment located at or eroded from any Chatham Harbor property.

2) The project meets all applicable peformance [sic] standards and would have no impact on outlying areas. Petitioner requests a seawall of the same design as those now protecting sixty percent of Chatham Harbor. Generally accepted scientific knowledge and experience at Chatham has shown that the design does not cause or accelerate erosion in outging [sic] areas.

Petitioner further states that he will not request a variance pursuant to 310 CMR 10.36. The fee may unconstitutionally condition his right to argue a variance. It is not in accordance with the Department's stated policies concerning the availability of review.

Petitioner reserves all rights to argue that a variance should be granted as this case involves an Order that "so restricts the use of the property as to constitute an unconditional taking without compensation":

1) The proposed project is the only reasonable alternative for the protection of interests identified by the Act

(supra). Waves of up to 35,000 foot pounds of force have struck petitioner's homes. Only seawalls can protect against such force. Petitioner's neighbor, Alfred Nelson, attempted beach nourishment. All sand was lost in a single storm.

2) The proposed project includes mitigating measures that protect the interests of the Act. The seawall is of the design approved by the Commonwealth for most of Chatham Harbor. The design protects the property it fronts without damaging outying [sic] areas.

3) A variance will further community interests and will prevent the further taking of petitioner's property. The project will protect adjacent low-lying areas and public ways from destruction. All seawalls built in Chatham since 1987 have proven successful. All other attempts at flood control have failed.

Petitioner's project should be approved as the wetland regulations (supra) upon which Chatham Conservation Commission based its denial are unscientific, irrational, and unsuited to mandated legislative purpose. The regulations condemn petitioner's property to destruction without a showing by the Department that the use to which petitioners wish to put their property constitutes a nuisance. The destruction of petitioner's property that can be expected by the Conservation Commission's project denial will have no compensating public benefit.

Given that petitioner's property is in imminent danger of destruction, request is made for a speedy determination.

This request has been sent, certified mail, to the petitioner and the Chatham Conservation Commission.

The petitioner reserves the right to update and amend this request with appropriate notice.

Sincerely,

/s/ Nicholas B. Soutter

NBS/mps

cc. Chatham Conservation Commission
Louis Hicks
Alfred Nelson
Madelyn Morris, Esq.

APPENDIX 2

VOL. I
PP. 1 – 52

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss. Superior Court
C.A. No. 89-881

****

JOAN WILSON, ET AL,

Plaintiffs

vs.

COMMONWEALTH OF MASSACHUSETTS, ET AL

Defendants

****

DEPOSITION OF GRAHAM SHERWOOD GIESE, taken on behalf of the Plaintiff, pursuant to the Massachusetts Rules of Civil Procedure, before Maryellen Coughlin, CSR/RPR, a Notary Public within and for the Commonwealth of Massachusetts, at the Law Offices of Nicholas B. Soutter, One Washington Street, Wellesley, Massachusetts, on Wednesday, July 12, 1994, commencing at 2:10 p.m.

HAROLD A. GABRIEL, CSR
15 Van Wart Path
Newton Centre, Mass. 02159
(617) 969-4791
FAX (617) 964-1321

APPEARANCES:

Nicholas B. Soutter, Esq.
One Washington Street
Wellesley, Massachusetts
Representing the Plaintiffs.

Kevin Steiling, Esq.
Assistant Attorney General
131 Tremont Street
Boston, Massachusetts 02111
Representing the Defendants.

PRESENT:

Vincent P. Maraventano
Karen Peterson

* * *

[p. 32] role in that because it appears to me that as the channel migrates to the south, each position of the channel is associated with an ebb tide delta, and that ebb tide delta becomes inactive as an ebb tide delta as it is left behind by the migrating channel, so that material is now available for transport back on to the beach, and one has to ask themselves why isn't there this large bar from the last cycle. It is not there because it was brought back in, so I think that may play an important role in rebuilding that beach.

Q Have you done, Doctor, any, I guess what we call them, isobathymetric studies of the distribution of sand about, say, a thousand feet off the barrier beach?

A No, I haven't done any studies off that barrier beach. Just a couple of years ago we did some bathymetric studies and also seismic studies which looked at the horizons beneath the sea floor along outer Cape Code from Provincetown down to Coast Guard

Beach, but I think our last profile was off Coast Guard Beach in Eastham.

Q With reference, Doctor, to the [p. 33] distinction drawn between dune and bank for purposes of seawall permitting, were you part of the group that recommended the regulations as they exist today, or not, if you remember?

A Yes, yes, I certainly was.

Q Can you tell us, sir, what the purpose was of that distinction, if you remember?

A Well, the group that actually did, the scientific group that did the recommendations did not recommend that they be, that there be a distinction in terms of seawall placement, that group recommended that there not be any seawalls allowed along any part of the shore which is providing sediment to the beach system through erosion, and that was that. The whole idea of their being some distinction between homes being on the coast which had been in place prior to 1978 AS opposed to homes built after 1978, '78 being the date of the publication of those regulations, was not part of the scientific group's recommendations. That distinction was made, as I understand it, by the, by the Commonwealth of Massachusetts in an effort to recognize the difficulties that homeowners who [p. 34] had homes on coastal banks prior to 1978 would experience as a result of the regulations.

MR. SOUTTER: I have no further questions, Doctor, thank you very much.

MR. STEILING: Can we just take a break?

(A break was taken at this time.)

Cross-examination By Mr. Steiling:

Q Doctor Giese, I just have a very few questions. I think I will be done very quickly. I just want to ask you about mainly one of the issues you were asked about by Mr. Soutter, and that is you were asked about an April 1987 address that you gave at Chatham High School, do you recall being asked about that?

A I recall the question.

Q Do you recall what you talked about in general?

A Well, yes, the reason for the meeting was to convey to the town what was known and what wasn't known and what we could say and what we couldn't say to provide guidance for the town's people concerning the situation which everyone

* * *

APPENDIX 3

August 17, 1994

M. Kathryn Sedor
Department of Environmental Protection
One Winter Street
Boston, MA 02108

RE: In the Matter of Alfred B. Nelson
Docket Nos. 92-140; 93-090
In the Matter of Lewis W. Hicks
Docket Nos. 92-152; 93-089

Deal Ms. Sedor:

I am writing to you to object to two misstatements of fact contained in the Department of Environmental Protection's Post Hearing Brief.

Page 9, paragraph C, line 6 states that Ole Madsen "admitted that all sand is not lost to deep water". Dr. Madsen's statement was that two-thirds of eroded sand returns to the beach. Dr. Madsen was not given a chance to explain whether that statement contradicted his previous sworn testimony that all sand is eventually lost in deep water. The affidavit was not put in evidence. I have enclosed a copy of the affidavit and call your attention to pages 1 and 2, paragraph 4, lines 3 and 4 where Dr. Madsen says that all eroded sand eventually goes out to sea.

In addition to violating the rule on impeachment of witnesses, taking Dr. Madsen's statement out of context seriously misrepresents known scientific fact. At a deposition attended by the Department, Dr. Graham Giese testified that substantially all sand eroded from the east

coast of Cape Cod is lost in deep water. I have enclosed the cover page and pages 21 and 22 from that deposition.

Dr. Giese was one of the two scientists who prepared the scientific testimony on which the Department's testimony is based (Applicants' Prefiled Testimony, Exhibit 32, Page 141).

Also from the Department of Environmental Protection's Post Hearing Brief page 3, lines 26 through 28: the DEIR did not conclude that high rates of erosion will begin with the break up of South Beach, but with the break up of the spit connecting South Beach. I have enclosed page 9 of the DEIR giving an estimate of when the spit will break up and enclosed pages 62 through 67 of the same document recommending immediate construction of a seawall to protect Little Beach (page 67).

I am satisfied that you will take these matters into consideration and do not require a formal statement on the record unless you feel that would be appropriate.

Thank you for your attention to this matter.

Sincerely,

/s/ Nicholas B. Soutter
Nicholas B. Soutter

NBS/nsd

cc: James Mahala
Vincent Maraventano
Bruce Gilmore

COMMONWEALTH OF MASSACHUSETTS

BARNSTABLE, SS SUPERIOR COURT
C.A. 90-1712

ALFRED NELSON, EVELYN NELSON,
LEWIS HICKS, III, AND BERNICE HICKS,
Plaintiffs

v.

COMMONWEALTH OF MASSACHUSETTS
AND TOWN OF CHATHAM,
Defendants

AFFIDAVIT OF OLE SECHER MADSEN, Sc.D.

Before me, the undersigned authority, personally appeared Ole Secher Madsen, who upon oath and after being duly sworn, deposes and says:

1) I am Ole Secher Madsen. I am a Professor at the Department of Civil Engineering at the Massachusetts Institute of Technology, Cambridge, Massachusetts. I am an expert in coastal sediment transport.

2) Given the ocean forces and conditions present at Chatham, only seawalls offer viable protection for plaintiffs' properties.

3) Seawalls will protect plaintiffs' properties without causing damage to outlying properties.

4) Every coastal state in the northeastern United States experiences a net loss of coastal sand as (1) more beaches are eroding than not and (2) all eroded sand eventually goes out to sea.

5) The apparent stability of the minority of beaches is achieved at the cost of erosion from the majority of

beaches. As eroding beaches become unable to put more sand into the system, the once "stable" beaches begin to erode.

6) Eroding sand moves down as it goes out to sea. When the same sand moves landward, it moves up along the slope of the beach. Even on a gentle slope (10 feet down per hundred feet offshore), one third less sand will return to the beach.

7) Massachusetts wetland regulations assume that the above-stated erosion pattern is a system of flood protection. This is incorrect. Massachusetts; coastal erosion sacrifices sand from eroding beaches without permanently protecting other areas.

8) Massachusetts wetland regulations make a distinction between "dune sand" and "coastal bank" which is extreme and unjustified. It is difficult to distinguish between the materials, particularly along the coast where they tend to be mixed. Any difference in their erosion-resisting properties is insignificant.

9) Making seawall construction dependent on the difference between "dune sand" and "coastal bank" produces gaps between seawalls in flood areas. This leads to "flanking" of the walls by water. Not only is this dangerous, but the dune sand is usually in such small quantities as to have no meaningful impact on flooding.

10) Seawalls do not cause erosion. They prevent sediment behind them from being eroded and they can interfere with the transport of sediment by littoral drift in a small way. Generally these problems are minor because

without the wall flooding will overcome any sand the wall might have blocked.

11) A properly designed and constructed seawall can, if properly maintained, last several centuries or more.

Signed under the pains and penalties of perjury.

/s/ Ole Secher Madsen
Ole Secher Madsen

COMMONWEALTH OF VIRGINIA

York, ss. Date: 12 November 1991

Subscribed and sworn to before me, the undersigned Notary Public.

/s/ Sarah R. Hamnrick
Notary Public

Comm. Exp.: 28 February 1994

VOL. I
PP. 1 – 52

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss. Superior Court
C.A. No. 89-881

****

JOAN WILSON, ET AL,

Plaintiffs

vs.

COMMONWEALTH OF MASSACHUSETTS, ET AL

Defendants

****

DEPOSITION OF GRAHAM SHERWOOD GIESE, taken on behalf of the Plaintiff, pursuant to the Massachusetts Rules of Civil Procedure, before Maryellen Coughlin, CSR/RPR, a Notary Public within and for the Commonwealth of Massachusetts, at the Law Offices of Nicholas B. Soutter, One Washington Street, Wellesley, Massachusetts, on Wednesday, July 12, 1994, commencing at 2:10 p.m.

HAROLD A. GABRIEL, CSR
15 Van Wart Path
Newton Centre, Mass. 02159
(617) 969-4791
FAX (617) 964-1321

APPEARANCES:

Nicholas B. Soutter, Esq.
One Washington Street
Wellesley, Massachusetts
Representing the Plaintiffs.

Kevin Steiling, Esq.
Assistant Attorney General
131 Tremont Street
Boston, Massachusetts 02111
Representing the Defendants.

PRESENT:
Vincent P. Maraventano
Karen Peterson

* * *

[p. 21] erosion.

Q Could you give us a range of the erosion rate as you estimated it at that time in late 1987?

A Yes, I will estimate that without reference to my notes which would do a little better, but I think it was about 50 feet. I think 50 feet had been eroded by, in December, by December sometime, but I'm not sure.

Q Sir, do you recall, do you have an opinion as to when erosion became noticeable or acute in the area of the Wilson house in 1987?

MR. STEILING: I'm going to just object to the phrase acute. If you can define acute more.

Q When was there perceptible erosion in the area of the Wilson House, if you know?

A I really don't know. I guess I was first aware of it in November but –

Q That's fine. Let me ask you, Doctor Giese, whether it is a fair generalization that the sand that is eroded from the east coast of Cape Code eventually all ends up in water at depths of 30 feet or greater?

[p. 22] A Eventually I would say that would be about right.

Q If you gave it a hundred years, that's where most of it is going to end up?

A The hundred years is a little bit tricky. I am thinking of the part that goes to, goes north to Provincetown. The outer shore of Provincetown is eroding, is building in net. However, most of the sediment that moves along the outer shore of Provincetown that gets as far as Race Point is deposited into deep water, because Provincetown hook extends out into a sea floor that's 200 feet deep at Race Point, and so for a little bit of accretion of the Provincetown hook to occur, there must be a great deal of deposition in deep water, because most of the volume of the Provincetown hook is under water. So I would say yes considering that, that, even though the Provincetown's hook is building out at the shoreline and that's not ten meters of water. But, still, I would say most of it would.

Q Let me read you a statement, sir, and this comes from the Provincetown's Center for Coastal Studies, testimony offered in support of

* * *

II. RESPONSE TO THE CAPE COD COMMISSION'S COMMENT LETTER DATED 21 JANUARY 1994

1. COMMENT pg. 2: Although there is clearly uncertainty involved, the DEIR should clarify projected time frames where possible. For example, p. 41 indicates that massive erosion in the Little Beach area will occur over the next several years. Earlier (p. 20) the DEIR states that South Beach is expected to begin to break up in 10 to 20 years and p. 21 cites a time frame for expected South Beach changes of 50 to 80 years.

REPLY: We apologize for the potential confusion regarding the barrier beach/inlet processes that will occur over the next several decades. The following timeline may be helpful:

TIME (years)	ACTIVITY
2-10	Spit connecting South Beach to mainland is breached and begins to break up
10-20	South Beach begins breaking up
50-80	Remnant shoals (formerly South Beach) attach to Morris Island

2. COMMENT pg. 2: The subcommittee has been provided with extensive information that indicates that the Little Beach area was previously a barrier spit/barrier beach. This new information is in direct contrast to the conclusions provided in the DEIR with regard to the "historic fill" areas on Little Beach. This information should be reviewed by the consultants and modifications to the DEIR made where necessary. This information is

important to the distinctions that the DEIR attempts to make between dune and bank.

REPLY: Please see reply to Mr. Doe's comments.

3. COMMENT pg. 2: The DEIR rejects the use of "Sta-beach" and similar alternatives based on a lack of experience with these technologies in areas with erosion rates of 100'/year or more (p. 61). Does the DEIR suggest that the study area is extraordinary, undergoing 100'/year of erosion? This seems contradicted by a statement later in the DEIR citing a "high" erosion rate at Blank-Brountas of 3.3' year. These numbers need further clarification.

REPLY: Please see reply to MCZM comments concerning Sta-beach. The future erosion potential at Little Beach may be 100'/year or more. The use of terms such as "high" are relative and often produce apparent contradictions when taken out of context. The erosion rates discussed for the Little Beach area refer to

* * *

XI. RECOMMENDED MANAGEMENT PLANS

Recommended Plans

The recommended plans were developed to implement the following management goals:

- Preserve the natural system function
- Preserve public access for health and safety
- Maintain economic viability of the region

Three plans are discussed below. Although the plans are presented as three separate plans, they were developed as integrated parts of one plan. Once the plan was developed, it was segmented to conform with other sections of the EIR. Additionally, the plan for Little Beach has been divided into sections to facilitate implementation and to ensure that all parts of the plan are needed before they are implemented. Furthermore, it is the intent of the plan that each of the Little Beach phases be completed at one time – the Little Beach plan is not intended to be implemented in a piece-metal fashion.

Recommendations for Little Beach

The alternatives section identified many potential erosion protection methods which have been incorporated into the recommended plans for the study area. Most of the shoreline between Bearse's Lane and the southern end of Morris Island is going to experience attack from open ocean waves within the next 5-30 years. The breakup of South Beach and the migration of New Inlet to the south will be episodic and occur over irregular spatial and temporal scales. These scales will be dependent upon the frequency and intensity of incident storms. In general, we recommend that a low revetment be constructed behind the existing dune immediately seaward of the existing houses for the Little Beach area. The elevation of the revetment should be no higher than the existing landform elevation or 10-12 ft NGVD, whichever is greater. We have made our elevation recommendations for the proposed revetment based on the existing Town topographic information. A detailed topographic survey of the entire Little Beach area was beyond the scope of

this project. Our intent in making this recommendation is that the revetment should make smooth transitions from one property to the next if there are changes in elevations. The top of the proposed revetment should *not* be stair-stepped when transitioning elevations.

When completed, the revetment will extend from Bearse's Lane to the Horne property. A sand berm is recommended for the area between the last Horne property and Outermost Harbor Marine. The sand berm will have a lined channel or culvert(s) through the structure to allow storm surge flowing from Stage Harbor to relax into the Chatham Harbor region. The property immediately to the south of Outermost Harbor Marine is presently protected by shore protection structures. The other low-lying properties between the Morris Island Dike and Outermost Harbor Marine are not protected and the shoreline in this region has exhibited some erosional tendencies in the recent months. We are not proposing protection for this area since we anticipate that this area will be protected by infilling of the marsh and by the welding of South Beach to the mainland. This should not be construed as a prohibition to shore protection structures in this region. If shore protection becomes necessary in the area south of Outermost Harbor Marine, they should be permitted. However, a shore protection scheme should be developed which has the minimum impact on the resource area but still provides protection for the houses.

The Little Beach revetment will serve as an anchor to prevent erosion of the land form and as an anchor for a series of groins which will be constructed seaward of the revetment at varying lengths (Fig. XI-1). A dune will be

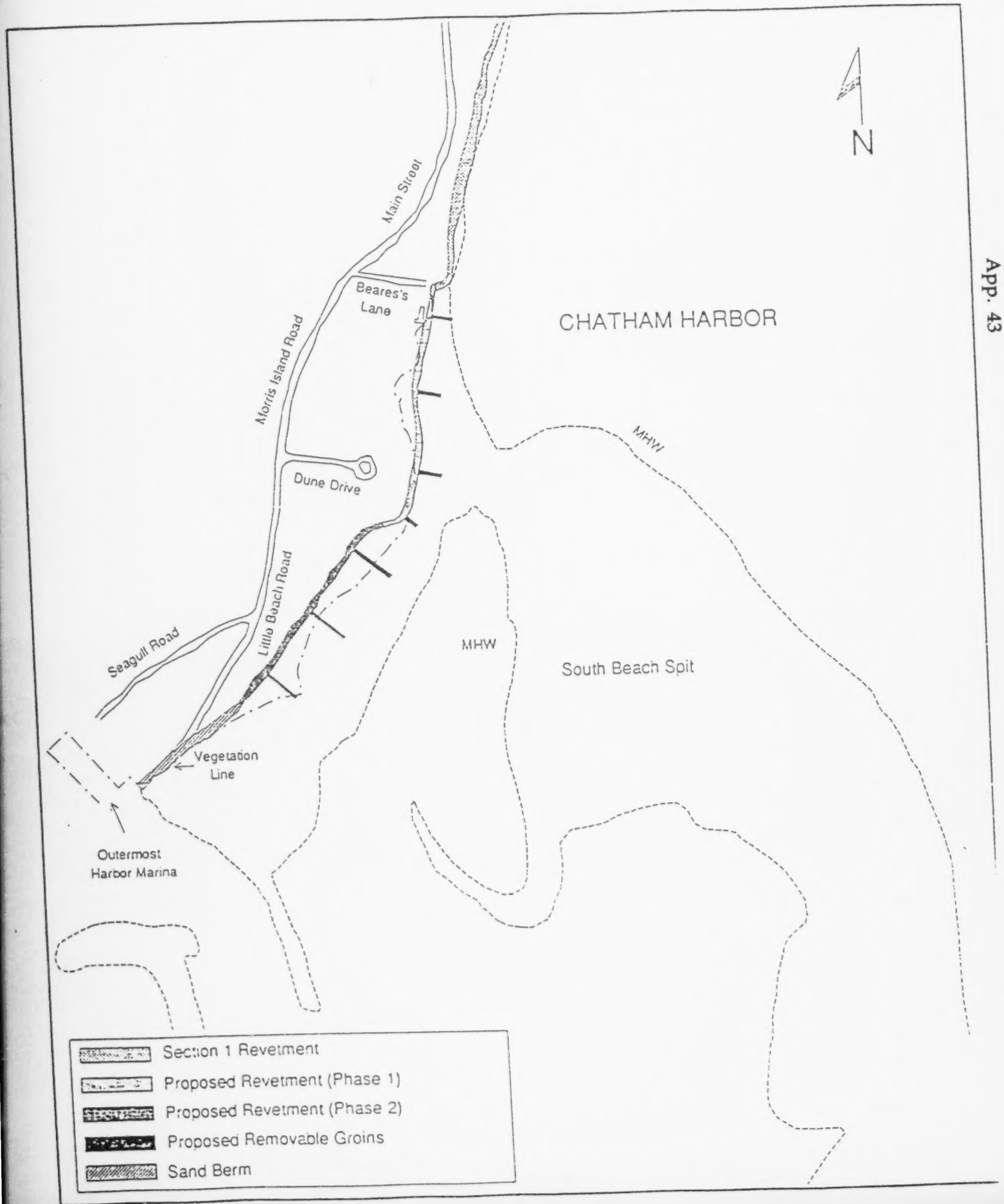
constructed over the groins and any low areas immediately seaward of the revetment. The dune will be constructed from clean, beach-compatible sand and planted with beach grass or other indigenous species to hold the dune in place. A sand berm will be constructed from the southern end of the Phase 2 revetment to Outermost Harbor Marine to an elevation between 9 and 10 ft NGVD. This sand berm between will require periodic maintenance due to possible storm damage, and the berm should also be vegetated. Repair and maintenance of the berm is projected to be required on an annual basis. The intent of the sand berm is to provide a measure of protection while still allowing flood waters to relax. Therefore, if the sand berm is damaged or destroyed frequently, other protection options for this area should be considered.

As we have stated, migration of New Inlet and/or the breaching of South Beach will occur episodically. Therefore, it is not possible to determine accurately when New Inlet will begin its next large move to the south. Presently, New Inlet is migrating to the south; however, the rates are low. These low rates of migration will continue as South Beach continues to be lowered in elevation by overwashing and decreased in width by erosion. This will continue until conditions are favorable for the entrance channel to move rapidly to the south. The intent of the plan is to preserve and enhance the natural protective abilities of the beach and dune resources presently in the Little Beach area. Therefore, the first section of the revetment, see Figure XI-1 (Phase 1), and the set of groins fronting this area should be constructed immediately. As the inlet moves to the south or as South Beach becomes

overwashed, the revetment should be extended and groins added as shown on Figure XI-1 (Phase 2). We would like to emphasize that the purpose of the groins is to help slow the transport of sand in the longshore direction. This will help preserve the dunes and beach which form the primary protection from the erosive action of waves. Therefore, it is important that the construction of the revetment and the groins should occur prior to the destruction of the fronting dunes.

The first section of the revetment and the first four groins should be constructed immediately. This will result in the construction of approximately 1,400

PROPOSED EIR 2
EROSION MITIGATION



App. 43

linear feet of revetment extending from Bearse's Lane to the Rice property. Additionally, there will be 3 to 4 groins constructed extending from the revetment 100 to 200 ft seaward. A dune will be constructed over the groins and any low areas immediately seaward of the revetment. The dune will be constructed from clean, beach-compatible sand and planted with beach grass or other indigenous species to hold the dune in place. This will eliminate low areas and minimize the potential for erosion from current flow once the dunes are overtopped or eroded.

The additional sections of the revetment should be constructed when the inlet migrates to the south so that the waves directly impact the shoreline and/or there is a breach in South Beach such that waves are transmitted through the breach on a regular basis. The purpose of this trigger condition is to ensure that the revetment and the groins are constructed and are functioning prior to the erosion of the beach and dune shoreward of the design length of the groins.

The revetment should be constructed of stone and should be designed to meet accepted coastal engineering standards. The recommended slope for the structure is 1 ft horizontal to 2 ft vertical. However, slopes may vary to meet design considerations. Additionally, the revetment should be designed to have appropriate toe protection to protect the revetment from potential wave and current scour. The groins should be constructed from either wood or steel sheet pile. The sheet pile construction of the groins will make them temporary allowing sections to be removed as needed. The groins will be kept filled to entrapment (or removed in sections) to ensure the interruption to littoral flow is minimized. Ultimately the

groins will be completely removed once North Beach migrates to the south and once again provides protection to this area. A more detailed description of when the groins should be removed is contained in the following section.

The intent of the recommended plan is to slow the longshore erosion of the beach and dunes that will occur as the inlet moves to the south. The revetment will stop erosion seaward of the houses and provide protection to the landform. Erosion of the dunes will occur on temporal and spatial scales similar to past erosion sequences experienced to the north which occurred immediately after the formation of New Inlet. The area to the north experienced episodic erosion of the beach and dunes on the scale of 30 ft or more per storm and as much as 300 ft in a single storm season. The erosion was primarily in the longshore direction. The groins will slow down the longshore erosion but not completely eliminate it. Keeping the groins filled to entrapment will ensure that sand is bypassed and is continually transported in the longshore direction. In order to ensure that the groins will remain filled to entrapment, they should either be shortened in sections as erosion occurs or artificially filled with sand. Once North Beach migrates south and the Little Beach area is no longer subjected to direct wave attack, the groins should be removed and the beach restored. The groin field could be used as a possible harbor dredge disposal area. This would help maintain the beach and the dune system, ensure the groins remain filled to entrapment, and provide a disposal area that is close to the site of dredging.

A groin/jetty should be constructed immediately to the north of Outermost Harbor Marine. This groin will trap longshore sediment which would transported into the marina entrance channel and onto the marsh fronting Morris Island Dike. The groin will form an impoundment area immediately to the north. This area will provide additional protection to the structures located adjacent to the marina and to the low-lying ball field area. Additionally, the beach elevation and dunes in the groin impoundment area could be artificially raised in elevation by using this area to dispose of dredged material. However, the elevation of this area should be carefully controlled to allow for the natural relaxation of floodwaters through the area immediately north of the marina.

The following specific recommendations are made for the Little Beach area. Both the recommended plan and mitigation measures are summarized below.

LITTLE BEACH RECOMMENDATIONS

General Recommendations

- Engineering plans should be completed for the project and the permits obtained for construction of revetment and groins.

- A dune should be constructed in any low areas that exist between the revetment and the existing dune line. This dune will be used to increase the volume of the existing dune. The dune should be composed of beach compatible sand and planted with beach grass or other indigenous plants.

- Sand fencing should be permitted to encourage future dune growth and to help stabilize the existing dunes.
- The Phase 1 and Phase 2 structures must be continuous. Discontinuous sections of revetment should not be permitted. If there is a gap in the protection, the integrity of the entire section will be compromised.
- The Conservation Commission will be responsible for determining when the trigger mechanisms have been met. The Conservation Commission should use local knowledge of the area and experience gained from erosion in the Phase 1 area to ensure the objectives of this management plan are accomplished.
- While the structure would not be below MHW if it is constructed as recommended, a Chapter 91 permit application should be filed as part of the permit package.

Phase 1 Recommendations

- Phase 1 (the first section) of the project should be constructed immediately. The first phase area extends from Bearse's Lane to the Rice property. Low areas extending from the revetment to the end of the groins should be back-filled with beach-compatible material and planted with beach grass. Construction will require the excavation of existing dune. Therefore, once the construction is completed, the groin should be completely covered over and planted. The groins should be no higher than 6 ft NGVD and should extend to a depth of 3.0 ft below MLW. The permit should be worded to ensure that the sand

used is beach-compatible because this material will ultimately be transported in the longshore direction and deposited on downdrift beaches. In addition, the revetments will be exposed to open ocean waves and should be designed accordingly.

Phase 2 Recommendations

- Phase 2 (additional sections of the groins and revetments) should be permitted once the trigger mechanisms are met. The additional sections of the revetment should be constructed when the inlet migrates to the south so that the waves directly impact the shoreline and/or there is a breach in South Beach such that waves are transmitted through the breach on a regular basis. The purpose of the trigger is to ensure that the revetment and the groins are constructed and are functioning prior to the erosion of the beach and dune shoreward of the Phase 2 revetment and groins.

- Engineering plans should be completed for the project and permits obtained for construction of a groin/jetty located immediately north of Outermost Harbor Marine. The groin should be constructed as part of Phase 2. However, this jetty could be constructed before Phase 2 if the Conservation Commission deems it would provide protection (increasing the beach and dune volume north of the groin/jetty) to the Little Beach area.

- The sand berm for the area between the Horne property and Outermost Harbor Marine should be permitted and constructed

once the trigger mechanism for the Phase 2 has been exceeded. The intent of the berm is to provide protection while still providing a relaxation point for flood waters entering from Stage Harbor. If the system does not evolve as outlined in the EIR, then this portion of the plan may be modified to accomplish the intent of the structure. If the berm requires continuous maintenance due to frequent storm damage, a hard structure should be considered along this area

APPENDIX 4

Testimony presented to the Department of Environmental Quality Engineering concerning the proposed additions and amendments to the existing regulations promulgated under the Wetlands Protection Act, G.L. c. 131, s. 40

Submitted

June 9, 1978

THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS

100 CAMBRIDGE STREET

BOSTON, MASSACHUSETTS 02202

[Logo]

COASTAL ZONE
MANAGEMENT

June 9, 1978

David Standley, Commissioner
Department of Environmental
Quality Engineering
100 Cambridge Street
Boston, Massachusetts 02202

Dear Commissioner Standley:

The enclosed material was prepared by the Massachusetts Coastal Zone Management Program and by the Provincetown Center for Coastal Studies and is presented as written testimony submitted to the Department of Environmental Quality Engineering concerning the proposed additions and amendments to the existing regulations promulgated under the Wetlands Protection Act, G.L. c. 131, s. 40.

Sincerely,

/s/ Lester B. Smith, Jr.
Lester B. Smith
Marine Geologist

/s/ Gary Clayton
Gary Clayton,
Marine Biologist

LBS:kc
enclosures

PROVINCETOWN CENTER FOR COASTAL STUDIES
P.O. Box 826/Provincetown, Massachusetts 02657/
(617) 487-3622

June 8, 1978

Department of Environmental Quality Engineering
100 Cambridge Street
Boston, Massachusetts 02202

Dear Sir or Madam:

The enclosed material was prepared by the Provincetown Center for Coastal Studies and by the Massachusetts Office of Coastal Zone Management and is presented as written testimony submitted to the Department of Environmental Quality Engineering concerning the proposed additions and amendments to the existing regulations promulgated under the Wetlands Protection Act, MGLA, Ch-131, Sec. 40.

This material forms the scientific basis for the proposed additions and amendments.

The preparation of this material was performed under contract awarded by the Massachusetts Executive Office of Environmental Affairs.

Sincerely,

/s/ Charles A. Mayo III
Charles A. Mayo III
Associate Scientist

/s/ Graham S. Giese
Graham S. Giese
Associate Scientist

cc/Ofc

VOL. I
PP. 1-52

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss. Superior Court
C.A. No. 89-881

JOAN WILSON, ET AL,
Plaintiffs

vs.

COMMONWEALTH OF MASSACHUSETTS, ET AL
Defendants

DEPOSITION OF GRAHAM SHERWOOD GIESE, taken on behalf of the Plaintiff, pursuant to the Massachusetts Rules of Civil Procedure, before Maryellen Coughlin, CSR/RPR, a Notary Public within and for the Commonwealth of Massachusetts, at the Law Offices of Nicholas B. Soutter, One Washington Street, Wellesley, Massachusetts, on Wednesday, July 12, 1994, commencing at 2:10 p.m.

HAROLD A. GABRIEL, CSR
15 Van Wart Path
Newton Centre, Mass. 02159
(617) 969-4791
FAX (617) 964-1321

APPEARANCES:

Nicholas B. Soutter, Esq.
One Washington Street
Wellesley, Massachusetts
Representing the Plaintiffs.

Kevin Steiling, Esq.
Assistant Attorney General
131 Tremont Street
Boston, Massachusetts 02111
Representing the Defendants.

PRESENT:

Vincent P. Maraventano
Karen Peterson

* * *

[p. 15] A I don't recall, but I wouldn't be surprised. The reason I say that is that in my notebook – I would have answered this differently if I hadn't reviewed my notebooks, but in my notebook I see a sketch on one of the pages where there is some, what looks to me to be sandbags drawn, and I'm not sure whether it was for the Wilsons, at the Wilsons or not.

Q Doctor Giese, carrying you back earlier to the years 1977, '78, did you at that time, sir, participate in the drafting of the present seawall regulations, 310 CMR, those sections with concern of coastal wetlands?

A Yes, yes, I helped with that.

Q And would you describe to us, sir, what your function was at that time and what you did?

A Well, I was an advisor to the, I guess it was the Executive Office of Environmental Affairs. My own direct

relationship was with the office of Coastal Zone Management, and I worked cooperatively with a Coastal Zone geologist at the office of Coastal Zone Management whose name was Lester Smith in designing regulations for storm damage prevention and flood control.

[p. 16] Q And did you, sir, sometime in 1978 coauthor a work designated as testimony in support of those regulations?

A Yes, yes, I did.

Q And that was in your capacity at Provincetown Center for Coastal Studies?

A That is correct.

Q And let me ask you, Doctor Giese, carrying you back to the Wilson property for the moment, did you, sir, examine that property to see whether it was on dune or on bank as defined in the regulations?

A I can't remember doing that, but I must – I can't imagine not having noted that. I remember that a colleague of mine named John Millerman had been involved either with the Wilsons or some neighbor of theirs with reference to that matter, but I do remember it was something that I didn't concern myself very much with.

Q And would you tell us, sir, whether that distinction as applied to the Wilson lot was important or not important in your opinion?

A Well, I didn't think it was important as [p. 17] to the erosion of their property. I thought it would erode whether it was dune or whether it was bank, but it

certainly was important relative to their obtaining permission to build a permanent seawall on their property.

Q Did you ever speak to Doctor Millerman, Doctor Giese, as to what he found on that property?

A I believe I did. In thinking about that, I believe that Millerman found that the Wilson house was on a dune but there was glacial material below the dune, and I can't remember at what elevation, but I think it was pretty low. By that I mean pretty close to sea level, but I don't remember.

Q And in your opinion, sir, as a general matter, what is the difference between dune and bank for purposes of allowing a seawall?

A Well, to answer that I think I have to say what is the difference between a dune and a bank geologically. The bank, as we know them on Cape Cod, is a deposit of sediment which deposit was laid down some 12 to 15,000 years ago by the melting of a glacial ice. A dune is made of [p. 18] material that had been relatively recently transported by the first wave action and then wind action to be deposited in recent times. The difference between them as far as protecting them from erosion as far as the regulations are concerned is that if a home was in place prior to 1978, the homeowner has reference to regulations which say that if all other options have been used up and they are on a coastal bank, then they can apply for permission to build a seawall. Whereas if that home was on a coastal dune, even though it was in place before 1978, they would not be able to apply for permission to build a seawall.

Q Let me ask you, Doctor Giese, whether we can agree that the major or sole source of dune sand is the erosion of coastal bank?

A Yes, yes, that's right, it is.

Q And would it be fair to say –

A Excuse me, here, in Cape Cod?

Q Yes, I'm talking about the outer Cape or eastern shore of Cape Cod.

A Right, yes, yes.

Q And do you know, sir, whether you or [p. 19] anybody to your knowledge ever studied the number of seawalls that there are on the Cape, that there were on Cape Cod in 1978?

A No, I don't think anybody has, that should be done.

Q Do you think anybody has studied the number of seawalls on the Cape as of the moment, present date, July of 1994?

A I don't know that they have.

Q It is just your knowledge, sir.

A I don't know they have, excuse me.

(Discussion off the record.)

Q Have you or anybody that you know of done a study as to how many seawalls might eventually be licensed under the exception for seawalls on bank where there are pre1978 houses?

A I don't know of it. I haven't. I have not.

Q Would you agree that that would be a useful number to have?

A I think it would.

Q Could we agree that if you put a seawall on bank that that's going to deny the sand in that bank to the formation of future dunes and [p. 20] beaches?

A Yes, it would.

Q Could we agree, sir, that if Mrs. Wilson's neighbors to her immediate north got seawalls that those might deny her dune sand?

A Yes, yes.

Q And can we agree that that dune sand would have in fact, might have in fact helped protect her property?

A It would I think very likely reduce the rate of erosion.

Q Did you form any opinion, sir, in October, November – well, whenever you were on the Wilson property, as to what the rate of erosion was on that property at that time?

A Yes. Let's see, I did. I made a measurement in November, and Ron gave me some measurements that he had made or told me of what an earlier distance to the scarp had been. I don't know that I really came up with an erosion rate until December of that year, 1987, because I did measure it in November, and I think I measured it

again in December. I'm not sure of the dates, but I did get some ideas of the [p. 21] erosion.

Q Could you give us a range of the erosion rate as you estimated it at that time in late 1987?

A Yes, I will estimate that without reference to my notes which would do a little better, but I think it was about 50 feet. I think 50 feet had been eroded by, in December, by December sometime, but I'm not sure.

Q Sir, do you recall, do you have an opinion as to when erosion became noticeable or acute in the area of the Wilson house in 1987?

MR. STEILING: I'm going to just object to the phrase acute. If you can define acute more.

Q When was there perceptible erosion in the area of the Wilson house, if you know?

A I really don't know. I guess I was first aware of it in November but –

Q That's fine. Let me ask you, Doctor Giese, whether it is a fair generalization that the sand that is eroded from the east coast of Cape Cod eventually all ends up in water at depths of 30 feet or greater?

[p. 22] A Eventually I would say that would be about right.

Q If you gave it a hundred years, that's where most of it is going to end up?

A The hundred years is a little bit tricky. I am thinking of the part that goes to, goes north to Provincetown. The outer shore of Provincetown is eroding, is

building in net. However, most of the sediment that moves along the outer shore of Provincetown that gets as far as Race Point is deposited into deep water, because Provincetown hook extends out into a sea floor that's 200 feet deep at Race Point, and so for a little bit of accretion of the Provincetown hook to occur, there must be a great deal of deposition in deep water, because most of the volume of the Provincetown hook is under water. So I would say yes considering that, that, even though the Provincetown's hook is building out at the shoreline and that's not ten meters of water, But, still, I would say most of it would.

Q Let me read you a statement, sir, and this comes from the Provincetown's Center for Coastal Studies, testimony offered in support of [p. 23] the regulation. I will read this statement. If you are not comfortable with it, I will give you the report, but I would just like you to comment on it?

A Sure.

Q Quote, were the erosion of the cliffs along the east coast of Cape Cod to be prevented, and this is a second quote, the beaches would disappear completely in 86 years and probably a lot sooner, and then the reference is in parentheses, Zeigler, et al, 1964, and I'm just wondering if you could comment on that, sir?

A I can. I am part of the et al.

Q I thought you were.

MR. STEILING: Can you give me the page?

MR. SOUTTER: Page 21.

A That's right, and what we did was to measure the rate of erosion of the cliffs, the glacial cliffs of outer Cape Cod and come up with an average long-term rate of retreat, which I think was 2.6 feet per year, and using that together with the height of the cliffs and appropriate consideration for the erosion of [p. 24] glacial material that was under water, the submarine component of the eroded surface, ended up with a volume material that went into transport per year. Then we divided into that that part of the beach deposit or beach and near shore deposits which were, which came from that material. I didn't say that very well. Part of the material that's eroded fell into the size, sediment size compatible with material that was on the beach, and so only a part of the volume which went into transport each year was beach size sand, but we were able to calculate that volume of beach size sand that went into transport each year, and so we divided the volume of the beach by the volume of material that went into the beach each year of that proper size and came up with, I think, 86 years.

Q And part of the significance, sir, of the sediment size is if the sediment grain eroded is compatible with the existing beach sediment grain, it is more likely to remain in the area of that beach, isn't that so?

A That is.

Q And the sediment size that is greater or

* * *

APPENDIX 5

COMMONWEALTH OF MASSACHUSETTS

APPELLATE TAX BOARD

NO. 203920, 204829
204830,
204831, 203921
203922, 204832

BERMINGHAM, DOGGETT, HALLOCK, HICKS, HORNE, NELSON, NELSON, AND RICE
Appellants

v.

BOARD OF ASSESSORS, TOWN OF CHATHAM
Appellee

AFFIDAVIT OF EVELYN AND ALFRED NELSON

Then personally appeared Evelyn and Alfred Nelson and swore that the following is true on personal knowledge and belief.

1) We have a house at 27 Morris Island Road, Chatham, Massachusetts. We are an [sic] appellants in the above-captioned matter.

2) Our house is on the shore of Chatham Harbor. It fronts the breach in the barrier beach. We have lost over two hundred feet of beach since 1989. We once lost fifty feet of beach in a day.

3) In April and May, 1991, we placed more than 3,100 cubic feet of sand at the high watermark of our property pursuant to permission granted by the Chatham Conservation Commission for flood control. This "beach

nourishment" cost in excess of $24,000. The "Halloween" Nor'easter [sic] of October, 1991 removed all of said sand from our property. Our house flooded, and suffered approximately $100,000.00 in damage. After the storm, the high water mark was approximately twenty feet from the house.

4) The storm flooded our house, the house of Bernice and Lewis Hicks, and the homes of several other appellants. The storm threatened all appellants with flooding and erosion. The storm did not reach hurricane force.

5) Our house remained approximately twenty feet from the sea through the winter of 1991-2 and the following spring, when erosion returned. We then added a sandbag seawall. Sand has built up since. The Phase II Environmental Impact Report for our section of the Chatham coast and representatives of the Commonwealth including James Mahala of the Department of Environmental Protection agree that this buildup is temporary and will not protect our house.

6) Our expenditures to date for flood control include $30,000 for beach nourishment and $104,000 for a sandbag seawall. The sand lasted six months (supra) and is not recommended for high energy storm areas such as Chatham. The manufacturer of the sandbags does not recommend their use where waves are higher than five feet. In Chatham, waves higher than this are common. The bags have a life expectancy of three years and are easily vandalized. In late May 1994, a state expert estimated that the life expectancy of the bags is two to ten years.

7) We are parties with Bernice and Lewis Hicks (also appellants in this matter) in administrative appeals and litigation involving the Commonwealth of Massachusetts and the Town of Chatham. The administrative appeal concerns denial of seawall permits. The litigation concerns said denial and the constitutionality of state and municipal wetlands regulations.

8) The administrative appeals process has gone on since 1989. The litigation has gone on since 1991.

9) To date the Commonwealth and Town of Chatham have been unwilling to allow anyone in the Little Beach area (marked with an "A" on attached map) to construct seawalls to stop flooding.

10) Given the certainty of flooding without a seawall, there is no market for our property.

11) To date the Hicks and Nelsons have spent approximately $240,000 in legal fees, $50,000 in expert fees, and $46,000 in costs trying to get seawall permits. This is a total of $336,000 on litigation, $60,000 of which was for the administrative appeal itself.

12) The total cost of litigation, flood control, and flood damage thus far is $570,000 or $285,000 per house.

13) In addition, the Town and homeowners have spent approximately $100,000 for Environmental Impact Reports pursuant to the Massachusetts Environmental Protection Act ("MEPA", G.L. c. 30, sec. 61-62H). The Commonwealth's certification of the "Phase II EIR" for appellants' homes does not include recommendations for flood control ("section 61 findings"). We will have to pay for these findings. Given the experience with the cost of

the EIR and cost of engineering studies for my property, I estimate this will cost at least $10,000 per appellant for plans, exerts and lawyers. An appeal would add another $10,000 to $20,000.

14) Twenty-nine seawalls have been built in the EIR study area since 1987. The Commonwealth's Waterways Division created standard seawall design specifications for Chatham in 1988. These seawalls cost approximately $1,000 per linear foot to construct. The average lot in the flood area is 150 feet across, bringing the average cost to construct a seawall in Chatham to $150,000.

Signed under the pains and penalties of perjury this 8th day of August 1994.

/s/ Evelyn S. Nelson
Evelyn Nelson

/s/ Alfred B. Nelson
Alfred B. Nelson

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss. August 8, 1994

Signed and sworn to before me, the undersigned Notary Public.

/s/ Nicholas B. Soutter
Notary Public
Comm. Exp.: 031695

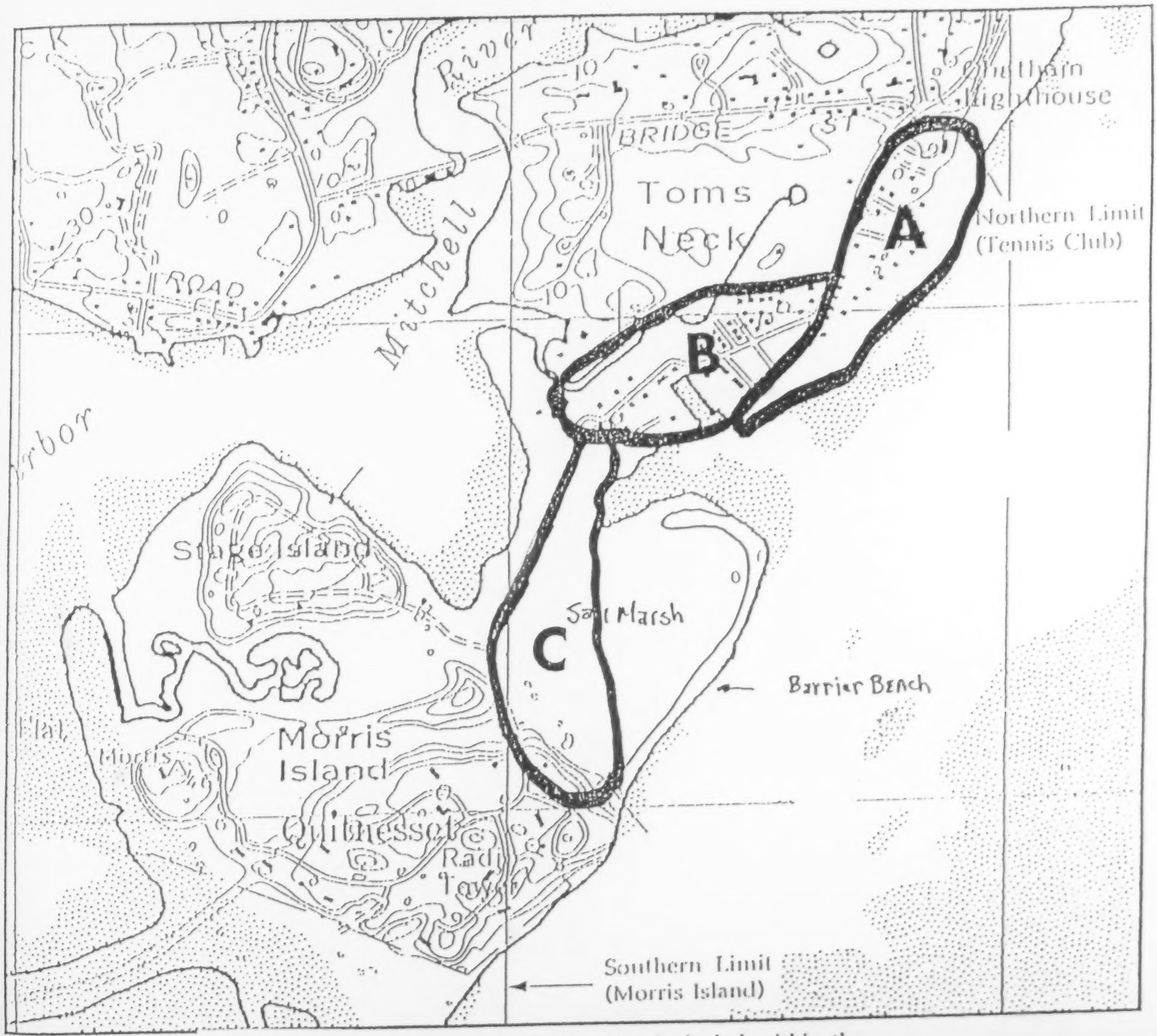


Figure 2.2: Chatham mainland shoreline included within the

APPENDIX 6

310 CMR: DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

* * *

1.01: continued

corrections and may make disposition thereof at appropriate times during the course of the proceeding.

(l) Briefs. At the close of the taking of testimony, the Agency or Presiding Officer shall fix the terms for the filing of briefs.

(m) Settling the Record.

1. Contents of Record. The record of the proceeding may consist of the following items: pleadings, prehearing conference memoranda, magnetic tapes, orders, briefs, and memoranda, answers to interrogatories and depositions, transcripts, exhibits, and other papers or documents which the Agency or Presiding Officer has specifically designated be made a part of the record. The record shall at all reasonable times be available for inspection by the Parties.

2. Evidence After Completion. No evidence shall be admitted after completion of a hearing or after a case submitted on the record, unless otherwise ordered by the Presiding Officer.

3. Weight of Evidence. The weight to be attached to any evidence in the

record will rest within the sound discretion of the Agency or Presiding Officer. The Agency or Presiding Officer may in any case require either Party, with appropriate notice to the other Party, to submit additional evidence on any matter relevant to the Adjudicatory Proceeding.

4. Exceptions. Formal exceptions to rulings on evidence and procedure are unnecessary. It is sufficient that a Party, at the time that a ruling is made or sought, makes known his objection to such action and his grounds, therefor, provided that, if a Party has no opportunity to object to a ruling at the time it is made, or to request a particular ruling at an appropriate time, such Party, within three (3) days of notification of action taken or refused, shall state his objection and his grounds therefor.

(n) Decision.

1. Tentative Decisions. Tentative decisions shall not be issued as a matter of routine, but shall be issued only if a Party requests a tentative decision either in writing or orally on the record, prior to the close of the hearing on the merits; or if the agency determines the tentative decision should be issued in the interest of justice. Every tentative decision shall be in writing and shall contain a statement of the reasons therefor, including a determination of every issue of fact

or law necessary to the decision. Whenever a tentative decision is rendered, the Parties shall have the opportunity to file objections to the decision and argument in support thereof, in writing with the Agency. The Parties shall have seven (7) days from the receipt of the tentative decision to make such filing. The Agency shall have the discretion to allow or order the Parties to argue orally before the head of the Agency.

If the majority of the Agency officials who must sign the Final Decision have personally heard or read the evidence, the Agency shall not be required to comply with a request to issue a tentative decision.

2. Final Decisions. Every final Decision shall be in writing and shall be signed by the Presiding Officer or by those officials of the Agency who are required by law to sign such Decisions. Every final Decision shall contain a statement of the reasons therefor, including a determination of every issue of fact or law necessary to the Decision, provided that if a final Decision was preceded by a tentative Decision, the final decision may incorporate by reference determinations set forth in the tentative Decision, subject to such modifications and discussion as the Presiding Officer or Agency may deem appropriate to respond to

timely filed opposing and concurring views with the tentative Decision.

3. Presiding Officer Unavailable. When a Presiding Officer becomes incapacitated or unavailable to render a Decision, a tentative Decision shall be rendered by a substitute Presiding Officer upon the record as herein defined.

(o) Reopening of Hearings. On its own motion or on motion of any Party, the Agency or Presiding Officer may at any time before a tentative or final Decision is issued request that the hearing be reopened for the purpose of receiving new evidence.

(p) Motion for Reconsideration. Any Party may file a Motion for Reconsideration, setting forth specifically the grounds or statutory provision relied upon to sustain the Motion, within ten (10) days from the date a copy of the Decision is mailed to the Parties by the Agency or Presiding Officer.

(q) Further Appeal. After the issuance of a final Decision, any Party who has the right to seek administrative or judicial review of the Decision may file with the appropriate administrative agency or court.

(r) Withdrawal of Exhibits. After a Decision has become final and all appeal periods have lapsed the Agency or Presiding Officer may in its discretion, upon motion, permit the withdrawal of original exhibits or any part thereof by the Party or Person entitled thereto.

(11) Stipulations and Agreements.

(a) Stipulations. The Parties may by written stipulation filed with the Agency or Presiding Officer at any stage of the proceeding, or by oral stipulation made at the hearing, agree upon any pertinent fact in the proceeding. In making its findings, the Agency or Presiding Officer need not be bound by any stipulation to which the Agency is not a party.

(b) Settlement by Agreement of the Parties. If at any time all Parties to the Adjudicatory Proceeding agree to dispose of the Adjudicatory Proceeding by stipulation, agreed settlement, or consent order, the Parties shall put such agreement in writing and submit it to the Agency for its approval. Every such agreement shall include a provision that if the Agency approves the agreement, the Parties waive whatever rights they have to

1. appeal the decision to any other Agency or to any Court,

2. rehearing, reargument and reconsideration,

3. notice of their rights of appeal and of rehearing, reargument and reconsideration, and

4. a tentative decision.

If the Agency determines that to proposed agreement is in accordance with the Agency's responsibilities to protect the interests entrusted to it by law, the Agency shall issue in writing a Final Decision incorporating the said agreement

among the Parties. Said Final Decision shall be signed by the head of the Agency. Except as specifically required by this Rule, said Final Decision shall not be subject to 310 CMR 1.01(10)(n). If the Agency determines that the proposed agreement is not in accordance with the Agency's responsibilities to protect the interests entrusted to it by law, the Agency shall refuse to approve the agreement, shall notify the Parties to that effect, and the Adjudicatory Proceeding shall go forward.

1.02: (Not Applicable to Proceedings before the Department of Environmental Quality Engineering, pursuant to 310 CMR 1.01(1)).

1.03: Miscellaneous Provisions Applicable to All Adjudicatory Proceedings

(1) Preamble. Section 1.03 of the Adjudicatory Rules of Practices and Procedure is applicable to all proceedings held under Sections 1.01 and 1.02 of these rules.

(2) Effective Date. These rules shall take effect ninety (90) days from the date of publication thereof by the Secretary of the Commonwealth and shall govern Adjudicatory Proceedings commenced after said ninety (90) days for all Agencies within the jurisdiction of these rules.

(3) Citation. These Rules may be cited as "Standard Rules" or "Standard Rules for Adjudicatory Proceedings" or "Standard Rules of Practice and Procedure", in each case followed by the particular rule or section number, or by

using the appropriate Code of Massachusetts Regulations numbers.

(4) Availability of Rules. Copies of all rules shall be available upon request to any person from the Office of the Secretary of the Commonwealth and the

* * *

10.04: continued

Estuary means:

(a) any area where fresh and salt water mix and tidal effects are evident; or

(b) any partially enclosed coastal body of water where the tide meets the current of any stream or river.

Extension Permit means a written extension of time within which the authorized work shall be completed. It shall be made on Form 7 of 310 CMR 10.99.

Fill means to deposit any material so as to raise an elevation, either temporary or permanently.

Final Order means the Order issued by the Commissioner after an adjudicatory hearing or, if no request for hearing has been filed, the Superseding Order or, if no request for a Superseding Order has been filed, the Order of Conditions.

Flat (tidal) is defined in Part II, 310 CMR 10.27(2)(b).

Flood Control means the prevention or reduction of flooding and flood damage.

Freshwater Wetlands are defined in M.G.L. c. 131. s. 7, para. 7.

General Performance Standards means those requirements established by 310 CMR 10.00 for activities in or affecting each of the Areas Subject to Protection Under the Act. They are found in Part II, 310 CMR 10.25 through 10.35 and 10.37, and Part III, 310 CMR 10.54 through 10.57 and 10.59 through 10.60.

Ground Water Supply means water below the earth's surface in the zone of saturation.

Important Wildlife Habitat Functions mean important food, shelter, migratory or overwintering areas, or breeding areas for wildlife.

Interests Identified in the Act means public or private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, protection of land containing shellfish, protection of fisheries, and protection of wildlife habitat.

Issuing Authority means a conservation commission, mayor, the selectmen or the Department, whichever is applicable.

Lake means any open body of fresh water with a surface area of ten (10) acres or more, and shall include great ponds.

Land Containing Shellfish is defined in Part II, 310 CMR 10.34(2).

Land Subject to Coastal Storm Flowage means land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.

Land Subject to Flooding is defined in Part III, 310 CMR 10.57(2).

Land Subject to Tidal Action means land subject to the periodic rise and fall of a coastal water body, including spring tides.

Land Under Salt Ponds is defined in Part II, 310 CMR 10.33(2).

Land Under Water Bodies and Waterways means the bottom of, or land under, the surface of the ocean or any estuary, creek, river, stream, pond, or lake. Land under the ocean and estuaries is further defined in Part II, 310 CMR 10.25(2); land under inland water bodies is further defined in Part III, 310 CMR 10.56(2).

Lot means an area of land in one ownership, with definite boundaries.

APPENDIX 7

NICHOLAS B. SOUTTER
ATTORNEY AT LAW
ONE WASHINGTON STREET
WELLESLEY, MASSACHUSETTS 02181

617-237-6300

617-237-6360

NICHOLS B. SOUTTER
PAUL S. MCGOVERN

AVOCAT
RECHTSANWALT
ABOGADO
ADVOGADO
ADBOKAT

February 7, 1992

BY HAND AND CERTIFIED MAIL

Wetland Protection Division
South East Regional Office
Department of Environmental Protection
Lakeville Hospital
Main Street
Lakeville, MA 02347

RE: Alfred B. Nelson, 27 Morris Island Road, Chatham, MA, File No. SE-10-987

Dear Sir or Madam:

The above-captioned petitioner hereby requests that the Department of Environmental Protection issue a Superceding Order to allow the above-captioned project.

The petitioner's situation is an emergency. His Chatham Harbor home is exposed to the direct force of storm-driven ocean waves. Further storm activity will destroy the home at any time.

Chatham Conservation Commission's denial of said project (Order of Conditions issued January 30, 1992) is inconsistent with the stated purpose of the Wetlands Protection Act (G.L. c. 131, sec. 40) and with provisions of 310 CMR 10.00 et seq. for reasons including but not limited to:

1. Proposed construction would take place in an area that is not significant to storm damage and flood control.

Chatham Harbor has experienced severe erosion since the 1987 breakthrough of the Chatham barrier beach. The erosion is caused by ocean waves. It is not controlled or mitigated by sediment located at or eroded from any Chatham Harbor property. Sediment eroded from the petitioner's property plays no role in flood-protecting outlying areas.

2. The project meets all applicable performance standards and would have no impact on outlying areas.

Sixty percent of the Chatham Harbor area is protected by DEP-approved seawalls. The petitioner requests a seawall of the approved design. Generally accepted scientific knowledge and experience at Chatham show that this design does not cause or accelerate erosion in outlying areas.

The petitioner requests a variance pursuant to 310 CMR 10.36:

1. The proposed project is the only reasonable alternative for the protection of interests identified by the Act (supra) including storm damage prevention and flood control.

In October, 1991, petitioner's property was exposed to storm-driven waves generating 35,000 foot pounts [sic] of force. Petitioner's DEP-approved sand nourishment project failed. Only the requested seawall can protect petitioner's property from this onslaught.

2. The proposed project includes mitigating measures that protect the interests of the Act.

The nature of coastal erosion in general and at Chatham, the manner in which seawalls commonly function, and the specific project design ensure that the proposed seawall will have no adverse impact on outlying areas.

3. A variance will further community interests and will prevent the further taking of the petitioner's property.

The project will protect low-lying, inland areas and public ways from destruction. All seawalls built in Chatham since 1987 have proven successful. All other attempts at flood control have failed.

Petitioner's project should be allowed as the wetland regulations (supra) upon which the Chatham Conservation Commission's based its denial of petitioner's proposal are unscientific, irrational, and unsuited to mandated legislative purpose. The regulations condemn petitioner's property to destruction without compensating public benefit.

Further grounds for petitioner's request are provided in memos, maps, affidavits, and technical article enclosed.

This request has been sent, certified mail, to the petitioner and the Chatham Conservation Commission.

The petitioner reserves the right to update and amend this request with appropriate notice.

Sincerely,

/s/ Nicholas B. Soutter

NBS/mps
Enclosures

cc. Chatham Conservation Commission
Madelyn Morris, Esq.
Bruce P. Gilmore, Esq.
Alfred Nelson
Louis Hicks

NICHOLAS B. SOUTTER
ATTORNEY AT LAW
ONE WASHINGTON STREET
WELLESLEY, MASSACHUSETTS 02181

617-237-6300

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NICHOLS B. SOUTTER
PAUL S. MCGOVERN

AVOCAT
RECHTSANWALT
ABOGADO
ADVOGADO
ADBOKAT

February 14, 1992

PRIORITY MAIL

Commonwealth of Massachusetts
Department of Environmental Protection
PO Box 4062
Boston, MA 02211

RE: Chatham – Wetlands File No. SE 10-987 Request for Superseding Order

Dear Sir or Madam:

In response to Department correspondence of February 11, 1992 concerning conditional acceptance of the above-captioned request, enclosed please find a check in the amount of $50.00 and completed Request for Departmental Action Fee Transmittal Form.

The petition has decided to withdraw the variance claim because they cannot afford the requested $4,000.00 fee.

The petitioner further states that said fee may unconstitutionally condition his right to argue a variance.

The Department is hereby notified that this case involves an Order that "so restricts the use of the property as to constitute an unconditional taking without compensation."

Please be further advised that this property is in imminent danger of destruction as there remains only forty feet of frontage between it and the ocean.

Request is therefore made for a speedy determination.

Sincerely,

/s/ Nicholas B. Soutter

NBS/mps
Enclosures

cc. DEP Lakeville, CERTIFIED MAIL/
FEDERAL EXPRESS
Alfred Nelson, CERTIFIED MAIL
Chatham Conservation Commission,
CERTIFIED MAIL
Madelyn Morris, Esq.
Bruce P. Gilmore, Esq.

NICHOLAS B. SOUTTER
ATTORNEY AT LAW
ONE WASHINGTON STREET
WELLESLEY, MASSACHUSETTS 02181

617-237-6300

617-237-6360

NICHOLS B. SOUTTER
PAUL S. MCGOVERN

AVOCAT
RECHTSANWALT
ABOGADO
ADVOGADO
ADBOKAT

July 8, 1992

CERTIFIED MAIL

Wetland Protection Division
South East Regional Office
Department of Environmental Protection
Lakeville Hospital
Main Street
Lakeville, MA 02347

RE: Lewis W. Hicks, III, 40 Dune Drive, Chatham, MA
File No. Se-101027

Dear Sir or Madam:

Enclosed please find a check in the amount of $50.00. Petitioner Lewis W. Hicks, III hereby requests that the

Department of Environmental Protection issue a Superceding Order to allow the above-captioned seawall project. The project was denied by the Chatham Conservation Commission on July 2, 1992.

Petitioner's situation is an emergency. His Chatham-harbor home is exposed to the direct force of storm-driven ocean waves. Further storm activity will destroy the home at any time.

Chatham Conseravation [sic] Commission's project denial is inconsistent with wetlands legislation (G.L. c. 131, sec. 40 and G.L. c. 130, sec. 105) and regulations (310 CMR 10.00 et seq.) for reasons including but not limited to:

1) The proposed construction would take place in an area that is not significant to storm damage and flood control. Chatham Harbor has experienced severe flooding that is not controlled or mitigated by sediment located at or eroded from any Chatham Harbor property.

2) The project meets all applicable peformance [sic] standards and would have no impact on outlying areas. Petitioner requests a seawall of the same design as those now protecting sixty percent of Chatham Harbor. Generally accepted scientific knowledge and experience at Chatham has shown that the design does not cause or accelerate erosion in outlying areas.

Petitioner further states that he will not request a variance pursuant to 310 CMR 10.36. The fee may unconstitutionally condition his right to argue a variance. It is not in accordance with the Department's stated policies concerning the availability of review.

Petitioner reserves all rights to argue that a variance should be granted as this case involves an Order that "so restricts the use of the property as to constitute an unconditional taking without compensation":

1) The proposed project is the only reasonable alternative for the protection of interests identified by the Act (supra). Waves of up to 35,000 foot pounds of force have struck petitioner's homes. Only seawalls can protect against such force. Petitioner's neighbor, Alfred Nelson, attempted beach nourishment. All sand was lost in a single storm.

2) The proposed project includes mitigating measures that protect the interests of the Act. The seawall is of the design approved by the Commonwealth for most of Chatham Harbor. The design protects the property it fronts without damaging outying [sic] areas.

3) A variance will further community interests and will prevent the further taking of petitioner's property. The project will protect adjacent low-lying areas and public ways from destruction. All seawalls built in Chatham since 1987 have proven successful. All other attempts at flood control have failed.

Petitioner's project should be approved as the wetland regulations (supra) upon which Chatham Conservation Commission based its denial are unscientific, irrational, and unsuited to mandated legislative purpose. The regulations condemn petitioner's property to destruction without a showing by the Department that the use to which petitioners wish to put their property constitutes a nuisance. The destruction of petitioner's

property that can be expected by the Conservation Commission's project denial will have no compensating public benefit.

Given that petitioner's property is in imminent danger of destruction, request is made for a speedy determination.

This request has been sent, certified mail, to the petitioner and the Chatham Conservation Commission.

The petitioner reserves the right to update and amend this request with appropriate notice.

Sincerely,

/s/ Nicholas B. Soutter

NBS/mps

cc. Chatham Conservation Commission
Lewis Hicks
Alfred Nelson
Madelyn Morris, Esq.

APPENDIX 8

E.I.T.

Engineering Information Technology, Inc.

Engineering Services Division

March 10, 1988

Ms. Judy Perry
Division of Water Pollution Control
D.E.Q.E.
One Winter Street
Boston, MA 02108

Re: Request for Water Quality Certification

Dear Ms. Perry:

As the Engineering Firm representing the B.R.E.A.C.H. Group, Chatham, Mass., we have been working with Mr. Charles Natale, Jr. and Mr. James Vincent of the Division of Waterways, since February 22, 1988, in developing an appropriate revetment plan for the present conditions that exist in Chatham. On March 7, 1988, we finalized the enclosed plan that we all feel will withstand the 100 year event and have minimal impact on adjacent areas.

We would now like to move forward by requesting a Water Quality Certification as discussed at our meeting in your office February 22, 1988. Thank you for the prompt help and attention afforded me throughout this process.

Respectfully,

Robert E. Weaver

REW:cj

73 Cranberry Highway (Rte. 6A), Box 631,
Sagamore, MA 02561 (617) 428-2676
73 Waverly Street, Arlington, MA 02174
(617) 782-5071

cc Mr. Kenneth Hagg
Acting Commissioner
D.E.Q.E.
One Winter St.
Boston, MA 02108

Waterways Regulations Program
D.E.Q.E.
One Winter Street
Boston, MA 02108
Attention: Charles J. Natale, Jr.

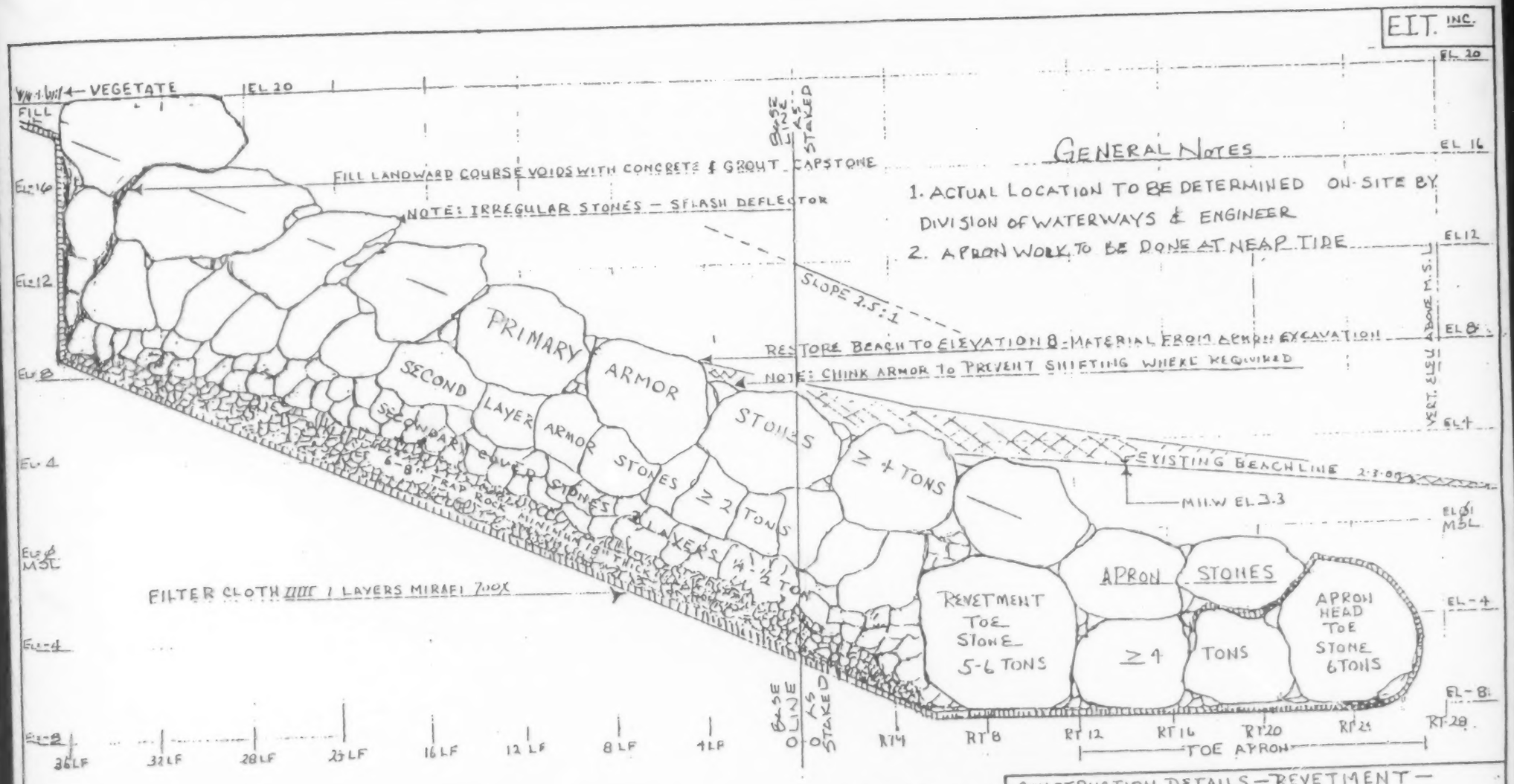
Gary Clayton, Division Director
Division of Wetlands-Waterways Regulation
D.E.Q.E.
One Winter Street
Boston, MA 02108

D.E.Q.E. – Southeast Region
Lakeville Hospital
Lakeville, MA 02347
Attention: Elizabeth A. Kouloheras

Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202
Attention: Steve Davis

U. S. Army Corps of Engineers
N.E. Division – Regulatory Branch
424 Trapelo Road
Waltham, MA 02254
Attention: Peter Kube

Mass. Coastal Zone Management
100 Cambridge Street
Boston, MA 02202
Attention: Jim O'Connell



GENERAL NOTES

1. ACTUAL LOCATION TO BE DETERMINED ON-SITE BY DIVISION OF WATERWAYS & ENGINEER
2. APRON WORK TO BE DONE AT NEAP TIDE

OWNERSHIP OF DOCUMENTS: All documents, including original drawings, estimates, specifications, field notes and data are and shall remain the sole and exclusive property of the Surveyor/Engineer as instruments of service. The Client may, at his expense, obtain record prints of drawings, in consideration of which the Client will use them solely in connection with the above described project and not for the purpose of making subsequent extensions or enlargements thereto.

COMMONWEALTH OF MASSACHUSETTS — WILLIAM LIEBERMAN — REGISTERED PROFESSIONAL ENGINEER

3-3-88

CONSTRUCTION DETAILS — REVETMENT — CHATHAM, MASS.

SCALE: 1" = 4'	APPROVED BY B.REACH PROJECT	DRAWN BY REW
DATE: MARCH 2, 88		REVISED: 3.4.88

ENGINEERING INFORMATION TECHNOLOGY INC.
73 WAVERLY ST. ARLINGTON, MA. 02174 428-2676
WILLIAM LIEBERMAN-PE #23971

DRAWING NUMBER: DETAIL DRAWING #2

AUBREY
CONSULTING, INC.

(logo)

PHASE I
DRAFT ENVIRONMENTAL IMPACT REPORT
SHORE PROTECTION STRUCTURES
AUNT LYDIA'S COVE TO BEACH AND
TENNIS CLUB
CHATHAM, MA

JANUARY 1993

* * *

6.0 ENVIRONMENTAL MITIGATION ALTERNATIVES ANALYSIS

6.1 Introduction

Because of the unique character of this Phase I EIR, namely providing environmental information to the permitting process following construction of emergency measures, this EIR follows a slightly different analysis procedure than most. Most EIR's require a thorough assessment of alternatives for the project. However, since this EIR covers only existing seawalls, permitted under emergency action, there is no need to describe alternatives to constructing the seawalls. As agreed to at a conference with regulatory personnel from MEPA and MCZM, held in Boston on 29 June 1992, this EIR addresses mitigation alternatives instead of project alternatives. After analysis of mitigation alternatives, a recommended alternatives mix is provided.

Where possible, we have indicated "trigger conditions," when some occurrence mandates implementation of an option at some time in the future. This adaptive plan provides much more effective management of Chatham Harbor than that possible if all options were to be implemented immediately.

6.2 Description of Alternatives

6.2.1 No Action

This alternative assumes that the shoreline protection structures remain as built, with no changes. The results of this No Action alternative will be the following:

- Increased erosion rates to the north of Section 2 (Fig. 4-12, towards Aunt Lydias Cove), due to loss of sediment supply.

- Undermining and likely failure of some revetments due to encroachment of the navigation channel towards the western bank (easterly mainland shore) and inadequate toe protection.

- Loss of beach fronting those revetments (much has been lost already), as wave scattering processes and lack of sediment supply increase water depths in front of the walls.

- Loss of public walking access along the beach as a result of loss of beach in front of the revetments.

6.2.2 Dune Reconstruction and Planting

Construction of revetments along with increased erosional forces due to the formation of the new inlet have

increased erosion rates along certain unprotected areas of the Chatham shoreline. Since the structures were constructed soon after the formation of the inlet, it is difficult to separate what percentage of erosion along unprotected properties is caused by natural processes and what percentage is caused by revetment construction. Severe overwashing of the coastal dune has

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6.2.5 Repair/Reconstruction of endangered and inadequate structures

Revetments that have been constructed may not be adequately designed to withstand the erosional forces along the Chatham Harbor shoreline. In some areas, erosion has washed away the beaches fronting the structures allowing waves to impinge directly on the revetment face during periods of normal water level. Severe storms will have a large impact on such areas since no beach exists to dissipate the wave energy before it strikes the revetment. Waves striking the revetment directly will cause scour at the toe of the structure, eventually leading to structural failure of the revetment. Other structures may have been designed as temporary structures (gabion revetments at the Dimm and Williams properties) or have inadequate stone size to resist direct storm wave attack (revetment at the Molander property). These revetments will require immediate repair to protect the integrity of the structure. Another mode of revetment failure documented is slumping due to the inadequate placement of filter cloth during construction. This deficiency has occurred at two structures located on the Burroughs and Zisette properties.

Rather than removing the existing structures, the old revetments were fortified by adding additional stone to increase the density of stone coverage and height of the structure. Filter cloth cannot successfully be placed between layers of rock, since uneven pressure of the rocks will cause tearing of the filter cloth. However, an attempt was made to place filter cloth between the rock layers. This fabric has been torn and no longer serves its original purpose. The revetment is beginning to slump as the result of sediment leaching out from the bank. These structures should be repaired by filling the voids with crushed stone and then chinking the gaps between the large stones. This mitigation will not eliminate sediment from leaching out from the bank but it will greatly reduce this process. All of the structural repairs suggested above should be implemented immediately.

Along Section 2 (Fig. 4-12), the erosion at the base of the structures is further complicated by the migration of the West Channel toward the shoreline. The migration of the channel is difficult to predict. A severe storm might change the position of the channel within the harbor. If the navigation channel continues to migrate toward the shoreline, stabilization of the toe of the revetments will be required. The navigation channel is closest to the shoreline at both the north and south ends of Section 2. Since West Channel is narrower at the north end of Section 2, causing stronger tidal currents, this area appears to be endangered more than the area to the south.

"Trigger conditions" for the two possible causes of erosion along the reveted sections, erosion due to wave action and erosion due to the migration of West Channel,

have been developed as guidelines for repair/construction of the existing structures. For structures not affected by the migration of West Channel toward the shoreline, the trigger condition for repair would be when either the top half of any revetment toe stone becomes exposed or when there is no beach fronting the structure at MLW. In addition, a property owner should initiate plans to repair their revetment when the top of any toe stone becomes visible. The engineer for each property owner having a

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App. 94

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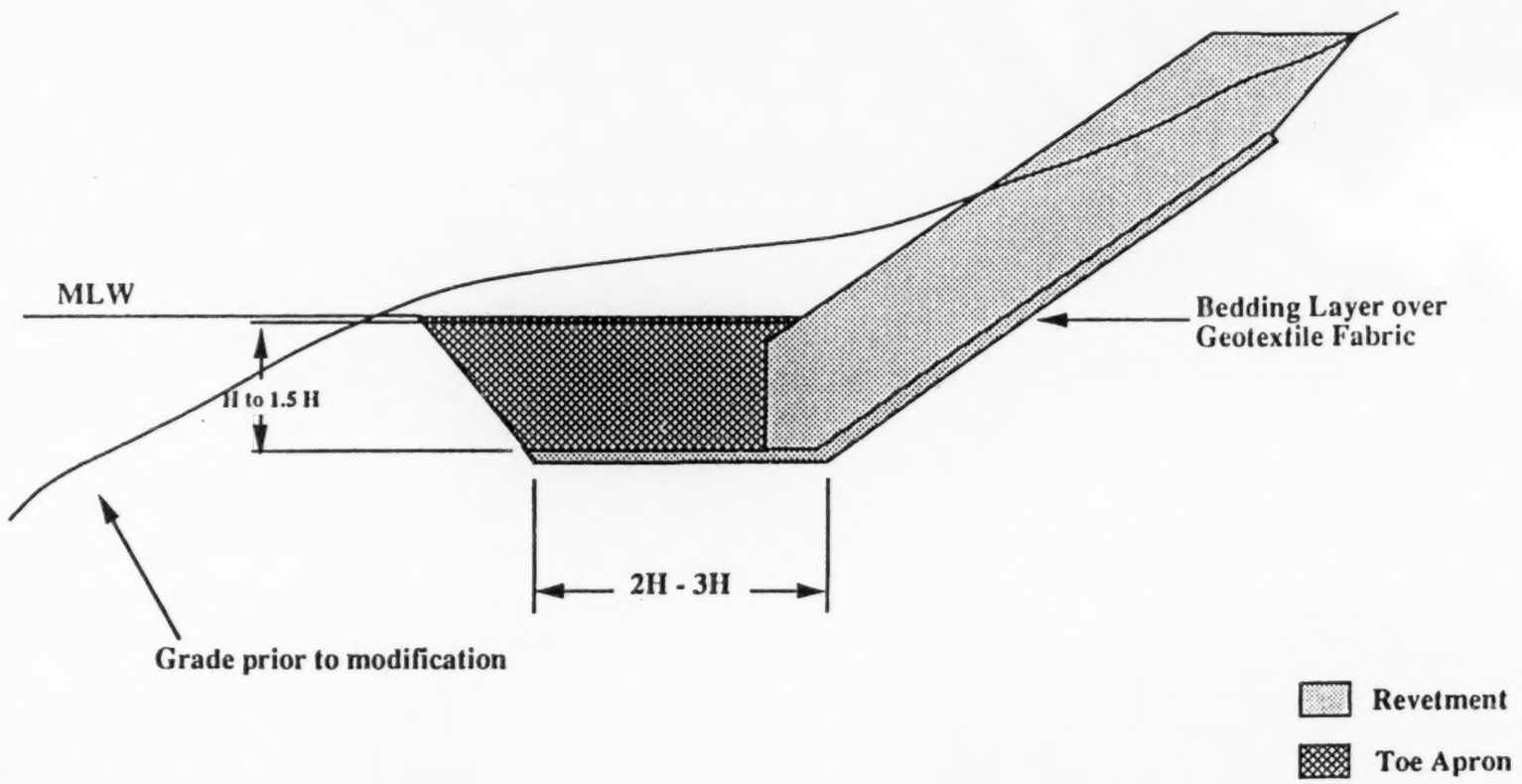
PHASE II
FINAL ENVIRONMENTAL IMPACT REPORT
TENNIS CLUB TO MORRIS ISLAND
CHATHAM, MA

MAY 1994

REVETMENT AND TOE SCOUR APRON



Note: H = Height of unbroken design wave
R = Thickness of armor layer

Figure I-2

Figure I-2. Typical cross-section of revetment and toe scour apron.

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VII. RESPONSE TO MR. NICHOLAS SOUTTER'S COMMENT LETTER DATED 17 JANUARY 1994

Mr. Soutter's comment letter puts forward several unique coastal engineering concepts. However, his main point is that his client, Mr. Nelson, would like to construct a seawall and this seawall should not be substandard.

1. COMMENT pg. 2: If the EIR is allowed, the most (Mr. Nelson) will get is a substandard seawall.

REPLY: Mr. Soutter's estimation of the design wave height expected at the Nelson property is incorrect. Additionally, a seawall does not have to be 20 ft high to withstand even Mr. Soutter's 18.5 ft predicted wave height. ACI has never advocated designing a seawall that will not withstand open ocean wave forces. This is the reason we have specified minimum standards for the proposed revetment in the DEIR. The actual design of each section will vary slightly depending on the elevation of the landform behind the seawall. We have explained this to Mr. Soutter in recent conversations.

2. COMMENT pg. 3: Since the beach needs 300,000 yd^3 of sand a year just to stay in place, dredging slows or stops beach growth to the south and could cause the beach to collapse. Dredging means that we will face the design wave soon and possibly forever.

REPLY: We are unclear about where the dredging Mr. Soutter is referring to will take place. However, we agree that the Nelson property will experience open ocean waves in the next several years. We do not agree that the

property will experience open ocean waves forever. The evolution of the barrier beach system will first cause the Nelson property to experience open ocean wave conditions and then North Beach will eventually grow southward to protect the area.

Interrogatory No. 6.

Identify members of all Study Groups (310 CMR 10.00, Preface 1983 regulatory Revisions, VI), task forces and/or Technical Review Groups (310 CMR 10.00, Preface 1983 Regulatory Revisions, Part II, paragraph 2, and Part V) and members of any other group contributing to discussion of study for the creation, drafting, or amending 310 CMR 10.21, 22, 23, 27-30 and 36 from 1974 to present, and summarize issues and comments and reasoning (pro and con), conclusions and dissent relative to any such study, enterprise or discussion.

Response to Interrogatory No. 6.

Lester B. Smith and Gary Clayton who were then with the Massachusetts Office of Coastal Zone Management, Charles A. Mayo and Graham S. Geise who were then at the Provincetown Center for Coastal Studies, Thomas Powers who was then a lawyer for the Department of Environmental Quality Engineering, Barbara Ingle who was then employed in the Wetlands Program, and James Coleman who was and is an employee of the Department participated in the original drafting of the Coastal Wetlands Regulations. There have been no study groups, task forces or technical review groups that were specially created to revise the provisions of the Wetlands Regulations that govern coastal dunes, coastal banks, coastal beaches and barrier beaches as means of flood control and storm damage prevention. The Commonwealth will make all comments on the original version of the Coastal Wetlands Regulations and any amendments to these

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